

# Environment Quarterly

EzemVelo Ngenyanga Ntathu • Mbango wa kotara • Mupo nga Kotara



**Launch of Gauteng  
Youth Jobs in Waste**

**An Improved Rainfall  
Season Forecasted**

**2016 Trees of the Year**



**environmental affairs**

Department:  
Environmental Affairs  
REPUBLIC OF SOUTH AFRICA



2016

# environment CALENDAR



**January**

S	M	T	W	T	F	S
					1	2
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31						

**February**

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**March**

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**May**

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**June**

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**July**

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24	25	26	27	28	29	30
31						

**August**

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**September**

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**October**

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30	31					

**November**

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**December**

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24	25	26	27	28	29	30
31						

2 February  
22 March  
23 March  
26 March  
22 April  
9 May  
22 May  
5 June  
8 June

World Wetlands Day  
World Water Day  
World Meteorological Day  
Earth Hour  
Earth Day  
World Migratory Bird Day  
International Biodiversity Day  
World Environment Day  
World Oceans' Day

17 June  
18 July  
31 July  
1 September  
12-16 September  
16 September  
22 September  
21 November

World Day to Combat Desertification  
Nelson Mandela Day  
World Ranger Day  
National Harbour Day  
National Parks Week  
World Ozone Day  
World Rhino Day  
World Fisheries Day



## Cover story

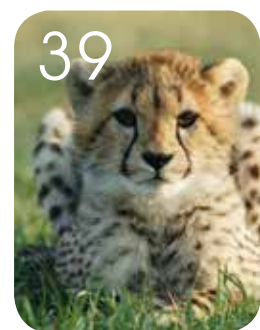
- 10** Focus on Waste: Minister hands over waste bins in Eastern Cape

## Features

- 15** DM donates 60 desks for Mandela Month  
**16** Minister Molewa celebrates Nelson Mandela Day  
**17** Environmental studies graduates recognised for their achievements  
**18** Kruger National Park drought  
**22** SANBI makes SA shine at Chelsea Flower Show  
**23** iSimangaliso - it's about people  
**24** Drought and floods – What to expect during the summer months  
**27** SA and South Sudan explore relations  
**28** Ethekwini and Mossel Bay triumph at 2016 GMC Awards  
**29** The Annual Rhino Awards  
**32** DEA launches Working for the Coast programme  
**34** National Marine Spatial Planning summit  
**35** Deputy Minister launches DEA Gender Strategy  
**37** Alien invasive species decrease water availability in North West

## Regulars

- 2** Editorial  
**20** Pull-out poster: CITES and Marine Species  
**26** Leadership Profile: Ms Frances Craigie  
**30** Research: The future of climate change through an African lens  
**31** Research: CSIR to develop high-tech capabilities to support Operation Phakisa  
**39** All Rise in Court: Search and seizure of a Cheetah Cub  
**40** Vox Pops: How do you think you can make money from waste?



To use this QR code conveniently you must have a smartphone equipped with a camera and a QR code reader/scanner application feature.





## Dear Valued Stakeholder,

It is a great pleasure to bring you yet another edition of the stakeholder publication, the Environment Quarterly.

In the second quarter of the year, the eyes of the conservation world and wildlife sectors were on Johannesburg when delegates from 182 countries met for the 17th Conference of the Parties to the Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES CoP17).

The international wildlife trade conference was hosted by South Africa at the Sandton Convention Centre from 24 September to 5 October 2016 to, amongst other matters, make recommendations

to improve the effectiveness of CITES, and ensure that the international trade in listed species of wild animals and plants does not threaten their survival in the wild.

South Africa also celebrated Heritage Day on 24 September under the theme "Celebrating Human Treasures by Asserting our African Identity".

Environmental Affairs Minister, Mrs Edna Molewa, has described CITES CoP17 as a platform where countries are expected to discuss not only the threats faced by rhino, African elephant, and African lion, iconic species on the African continent, but also matters relating to livelihoods, effective implementation of the Convention, and proposals to bring species under international trade regulation provided by CITES or change the levels of regulation applicable to listed species.

Of the over 35 000 species of plants and animals, including their products and derivatives, regulated by CITES, less than 1 000 are listed on Appendix I. Appendix I includes species threatened with extinction and trade in specimens of these species is permitted only in exceptional circumstances. More than 34 000 species are listed on Appendix II and III. Appendix II includes species not necessarily threatened with extinction, but in which trade must

be regulated in order to avoid utilization incompatible with their survival; while Appendix III contains species that are protected in at least one country, which has asked other CITES Parties for assistance in controlling the trade.

South Africa also submitted a draft decision relating to the monitoring of international trade in cycads, the most threatened taxonomic group of organisms with many species facing imminent extinction in the wild as a direct result of human activities. South Africa is one of the world centres of cycad diversity with 29 of the 38 cycad species that occur in South Africa being endemic to South Africa.

You can also look forward to an article on the annual Rhino Awards that seek to recognise those individuals who fight to keep the remaining of Africa's rhino population alive. We also look at how municipalities are working to help people gain a better understanding of the types of waste through waste characterisation. We urge you to share this edition of Environment Quarterly with friends and colleagues. Remember that the edition is also available online at [www.environment.gov.za](http://www.environment.gov.za) under the Media & Publications page.

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# CITES COP17 CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA & FLORA

[www.citescop17jhb.co.za](http://www.citescop17jhb.co.za)



**24 SEPT - 5 OCT  
2016**

**Sandton Convention Centre, Johannesburg, South Africa**



**environmental affairs**

Department  
Environmental Affairs  
REPUBLIC OF SOUTH AFRICA





# DEA Events in Pictures

## WED and WDCD celebrations in Mpumalanga



To celebrate World Environment Day (WED) as well as the World Day to Combat Desertification (WDCD), the Minister of Environmental Affairs, Mrs Edna Molewa officially opened Andover Nature Reserve in Mpumalanga on 03 June 2016.

*Image by Veronica Mahlaba*

## Environment Month exhibition at OR Tambo



In a bid to educate the public about the illegal trade in wild animals, the Department of Environmental Affairs' Legal Authorisations and Compliance Inspectorate and Environmental Programmes celebrated Environment Month celebration at OR Tambo International Airport on 29 June 2016. This year's Environment Month was celebrated under the theme, "Zero Tolerance for the Illegal Trade in Wildlife".

*Image by Beatrice Makgwale*

## Going Wild for Life

DEA Green Scorpions hosted their first annual run against the illegal trade in wildlife at the SANBI Botanical Gardens in Pretoria. DEA ladies pose for a photo with the Deputy-Director General: Legal Authorisations, Compliance and Enforcement Mr Ishaam Abader and Chief Director: Enforcement Ms Frances Craigie. From left: Ms Aluwani Ramugondo, Ms Phindile langazane, Ms Ntakadzeni Tshidada, Ms Lucia Motaung and Ms Nomusa Mbuyazi.

*Image by Erica Mathye*



## Launch of the Gauteng Youth Jobs in Waste

The Minister of Environmental Affairs Mrs Edna Molewa with the Executive Mayor of West Rand District Municipality Councillor Mpho Nawa and Executive Mayor of Westonaria Municipality Councillor Nonkoliso Tundzi at the launch of the Gauteng Youth Jobs in Waste, a project that is worth of R30 million.

*Image by Gaopalelwe Moroane*



## SA and China sign the Plan of Implementation on Areas of Environmental Management

The Director-General of the Department of Environmental Affairs (DEA), Ms Nosipho Ngcaba and the Deputy Director-General: International Relations of the Ministry of Environmental Protection of the People's Republic of China (PRC), Mr TU Ruihe during the signing of the Plan of Implementation on Areas of Environmental Management.

*Image by Teko Ramaidi*



# Minister Molewa donates school uniform in Ladysmith

By Veronica Mahlaba



**Above:** Learners of Sichelokuhle High School in Ladysmith receive school uniform.

As part of celebrating Youth and Environment Month, the Minister of Environmental Affairs, Mrs Edna Molewa handed over school uniforms and stationery to the learners from Sichelokuhle High School in the rural area of Ladysmith on 11 June 2016.

The visit was part the Minister's Back to School programme focusing on disadvantaged communities and schools in poor communities. Minister Molewa stated that the programme came about in the interest of improving education which will ultimately contribute to the development of the community and our country.

"A nation that is educationally driven will grow the country stronger and stronger. As government we

encourage old and young people to get educated as it is the only way to have a great future," said Minister Molewa.

The principal of the school, Mr Khumbulani Hadebe explained that receiving the school uniforms and stationery will go a long way in advancing the education level of the learners. "Instead of learners being worried about their appearance when they go to school, they can now concentrate on doing well in their subjects and getting good results. Your responsibility as a learner is to just come to school clean and ensure that you are studying. As a school we would like to than the Minister for visiting us and fulfilling one of the greatest needs that the school has," said Mr Hadebe.

The visit also provided a platform for Minister to create environmental awareness, encouraging active participation and partnerships among the various stakeholders such as teachers, learners and parents to strive towards environmental protection.

Minister appealed to the learners to take better care of the environment to curb the advancement of climate change. She also spoke about safekeeping the country's endangered species. "Rhino poaching is one of the problems that the country is facing. Poaching of rhinos creates an imbalance in the ecosystem and that kills our environment, which will ultimately kill us," Minister Molewa said.



## **About the contributor: Veronica Mahlaba**

Veronica Mahlaba is the Senior Communication Officer: Editorial Services at the national Department of Environmental Affairs, serving under the Communications Chief Directorate. Ms Mahlaba has experience as a Lecturer in the Media Studies Department at a private college. She has worked as writer for a metropolitan municipality and she is a keen photographer.



# 2016 TREES



Medium to large tree, up to 18 m high, with leafy, rounded to spreading crown. Exudes milky latex when cut. Main stem thick, often with grooves; growing in soil or on other trees and strangling them. Bark grey, smooth, sometimes with aerial roots. Branchlets smooth or hairy. Leaves spirally arranged or in groups at the same level on branches, held erect, leathery; elliptic to narrowly upside down egg-shaped and slightly wider above the middle (45–120 × 17–60 mm); mid- to dark green and sub-glossy above, paler below, usually without hairs throughout, rarely finely hairy; leaf tip rounded to pointed; leaf base rounded or narrowing towards leaf stalk which is 7–48 mm long. Fruits round, 10–20 mm broad, usually hairy, green; ripening pink or yellowish; sitting on a thick saucer-shaped plate; borne singly or in pairs in angle between leaf and stem or just below the leaves, with or without a short stalk (up to 7 mm long). Edible fruits (figs).

National tree number: 48  
 Family: Moraceae  
 Common names: common wild fig, strangler fig

*Ficus burkei*  
 (Miq.) Miq.



*Ficus petersii*  
 Warb.

National tree number: 48.1  
 Family: Moraceae  
 Common names: Peter's fig

Medium to large tree, up to 20 m high, and ± 15 m wide with rounded crown. Exudes milky latex when cut. Main stem straight; growing on other plants at first (rarely a rock-splitter) or free-standing. Bark pale grey, smooth, becoming darker and rougher with age; young branches often with an orange tinge. Branchlets and twigs greyish and finely hairy. Leaves spirally arranged, in groups towards the ends of the branches; elongated and wider above the middle to upside down egg-shaped (40–80 × 15–28 mm); green to greyish green, hairless when fully grown; leaf tip rounded to shortly pointed; leaf base narrowing towards leaf stalk; leaf stalk long and slender, 30–50 mm long, without hairs, grooved above. Fruits round, slightly hairy to hairless, yellow-green to pinkish when ripe; without a stalk or shortly stalked, borne typically on bare twigs in dense groups.

- |                   |                   |                  |                   |             |               |
|-------------------|-------------------|------------------|-------------------|-------------|---------------|
| Attracts birds    | Moderate water    | Frost tender     | Requires full sun | Evergreen   | Medicinal use |
| Attracts insects  | Drought resistant | Half frost hardy | Semi shade        | Deciduous   | Edible        |
| Beautiful flowers |                   | Frost-resistant  | Requires shade    | Useful wood | Poisonous     |



# OF THE YEAR

Small to medium-sized, rounded tree; up to 10 m high. Stem grey. Branches hairless, covered with many small white spots. Leaves spirally arranged, broadly elliptic to upside down egg-shaped, but wider below the middle (20–70 × 13–42 mm); hairless, soft, drooping; margin smooth; leaf tip rounded, occasionally with v-shaped indentation, ending in small hair-like tip; leaf base broadly tapering to rounded; leaf stalk long, slender, 5–30 mm, swollen and channelled just below leaf. Flowers very attractive, sweetly scented, creamy white fading to yellow, petals absent, stamens long, prominent; flowering time July to December. Fruits long drooping pods, 160 mm long, narrowed between seeds; appear from September to April; thought to be poisonous.

**National tree number:** 132  
**Family:** Capparaceae  
**Common names:** beadbean

*Maerua angolensis*  
 DC. subsp. *angolensis*



*Maerua cafra*  
 (DC.) Pax

**National tree number:** 133  
**Family:** Capparaceae  
**Common names:** bushcherry, spiderbush

Shrub or small tree; up to 10 m high. Main stem ± 250 mm in diameter, bark white and mottled, freshly cut wood smells unpleasant; roots thick and tuberous. Young branches covered with small white spots. Leaves spirally arranged, stalk long (15–60 mm), leaf blade compound, usually with 3 leaflets, occasionally 5 leaflets; leaflets elliptic to upside down egg-shaped but wider below middle (20–75 × 6–35 mm long), terminal leaflet longer than others; leathery, hairless; margins smooth, tip of each leaflet narrowed to rounded with fine hair-like tip, base of each leaflet narrowed; leaflets with short stalks, 1–5 mm long. Flowers attractive, scented, borne in groups, petals absent, with tufts of spreading stamens; flowering time August to October. Fruits round, smooth or covered with very small bumps; green with dark green vertical lines; hanging on stout stalks; appear from October to December.







## 2016 TREES OF THE YEAR



The National Herbarium is one of three SANBI herbaria. It houses the largest collection of plant specimens in southern Africa and is the fourth largest herbarium in the southern hemisphere with well over a million specimens. We provide foundational science information for plant taxonomic studies and other related research. The foundational science information that we generate and maintain at the National Herbarium is made available to other divisions within SANBI, and also to conservation authorities, decision-makers, academic and research institutions, the general public, and other stakeholders.

We provide a plant identification service, botanical information and herbarium educational tours. For further information, please contact us:

E-mail: [National.Herbarium@sanbi.org.za](mailto:National.Herbarium@sanbi.org.za)  
Tel.: 012 843 5000.

According to the official list for trees of the year, which was developed several years ago by the Department of Water Affairs and Forestry, the 2016 common tree of the year is *Ficus thonningii*. However, recent phylogenetic evidence suggests that several distinct *Ficus* species are classified as *F. thonningii*. True *F. thonningii* was described from Ghana and is restricted to West Africa. Two southern African species, *F. burkei* and *F. petersii*, previously synonymised under *F. thonningii*, are regarded as good species and are therefore listed as the 2016 trees of the year.

### *Maerua angolensis* DC. subsp. *angolensis*



**National tree number:** 132. **Family:** Capparaceae.  
**Common names:** beadbean (English); knoppiesboontjie (Afrikaans); Knopfschotenbaum (Deutsch); tchidzyambuzi (Chisena); umenwayo (siSwati); siachiseni (Tonga/Chitonga); papule (Xitsonga); moomane (Setswana); mutamba-na-mme (Tshivenda); umenwayo (isiZulu).

**General appearance:** A tree in low-altitude wooded grassland, woodland and thickets.

**Distribution and habitat:** Occurs widely throughout the northern regions of South Africa from KwaZulu-Natal in the south, Mpumalanga, Limpopo Province and North West Province. It also occurs in Swaziland, Mozambique and northwards to central Africa. It is found in arid bushveld and thickets where it generally prefers sandy, loamy and rocky soil.

**Meaning of name:** *Maerua* – origin and meaning uncertain, may be derived from Arabic; *angolensis* – first described from a specimen collected in Angola.

**Ecology and uses:** Host plant for butterfly larvae of the family Pieridae (whites). Leaves are browsed by game and livestock, and leaf extracts are used medicinally for various ailments.

**As a garden tree:** It is easily propagated from seeds. The pulp around seeds must be removed, as it contains a growth inhibitor that retards germination. Sow seeds in flat seedling trays filled with river sand and cover with a thin layer of compost or sandy soil. Germination usually takes 12–20 days. Transplant seedling into nursery bags filled with river sand, loam and compost in a ratio of 3:1:1. Young beadbean trees grow very fast at a rate of 800 mm per year. They prefer semi-shaded areas, but can grow in shade or sun. Trees are frost and drought tolerant and usually flower after 3–4 years.

### *Maerua cafra* (DC.) Pax



**National tree number:** 133. **Family:** Capparaceae.  
**Common names:** bushcherry, spiderbush (English); witbos (Afrikaans); Buschkirsche (Deutsch); umphunzisa (isiXhosa).

**General appearance:** A shrub or small tree, found in open woodland, various forest types and dune bush.

**Distribution and habitat:** Confined to southern Africa, from the southern Cape, north along the eastern part of South Africa, Swaziland, southern Mozambique, and the northern provinces of South Africa. It is found in bushveld, wooded grassland and along forests margins. It also occurs in rocky areas.

**Meaning of name:** *Maerua* – origin and meaning uncertain, may be derived from Arabic; *cafra* – derived from the old word *Caffraria*, a classical name for South Africa. It is derived from the Hebrew *kafri* for 'person living on the land'.

**Ecology and uses:** Leaves are browsed by game. Roots used medicinally and powdered roots are used as a substitute for chicory.

**As a garden tree:** Bushcherry trees can be propagated from seeds, which must be sown fresh. The germination percentage is often high, but plants can take 3–7 years to reach a height of 1 m. Trees must be planted in protected spots in cold gardens. They are suitable for semi- to deep shade. Mature shrubs are slow growing and drought resistant.





## *Ficus burkei* (Miq.) Miq.



**National tree number:** 48. **Family:** Moraceae.

**Common names:** common wild fig, strangler fig (English); gewone wildevy (Afrikaans); Gemeine Wilde Feige (Deutsch); mouro (Sepedi); inkho-khokho (siSwati); moumo (Setswana); muumo (Tshivenda); umthombe (isiXhosa); umthombe (isiZulu).

**General appearance:** A medium-sized, spreading tree, usually with some aerial roots; found in woodland, wooded grassland, hill slopes and edge of damp areas.

**Distribution and habitat:** Occurs in the Eastern Cape, KwaZulu-Natal, and through northern South Africa to Kenya. It is found on rocky hillsides, woodland or semi-deciduous forest.

**Meaning of name:** *Ficus* – Latin name for figs; *burkei* – in honour of Joseph Burke (1812–1873), an English plant collector who collected mostly in the four northern provinces of South Africa.

**Ecology and uses:** Bark fibres are used in mat making. Figs are eaten by humans, birds, bats and antelope. Inside the figs a remarkable symbiosis exists whereby certain fig wasp species pollinate the flowers; many are species-specific and both pollinators and non-pollinators can be found. Larval food plant for the Lesser Fig-tree Blue butterfly (*Myrina dermatoptera dermatoptera*). Abnormally large figs develop as a result of heavy infestation of the fruit by gall-forming wasps.

**As a garden tree:** The common wild fig can easily be propagated from cuttings and truncheons. Prepare cuttings of  $\pm 200$  mm long, remove the bottom leaves, plant in river sand and keep moist. Place the truncheons in the shade for a few days and place river sand in the bottom of the hole before planting, to prevent rotting. It is a fast grower and becomes a fair-sized tree very quickly. Young plants must be protected from cold winters for the first two to three years. Mature plants are moderately frost and drought resistant. It is frequently cultivated for shade and attracts birds to the garden.



## *Ficus petersii* Warb.



**National tree number:** 48.1. **Family:** Moraceae.

**Common names:** Peter's fig (English); petersvy (Afrikaans); Peters-Feige (Deutsch); inkhokhokho (siSwati); nkuwa (Xitsonga); moumó (Setswana); muumo (Tshi-venda); umthombe (isiXhosa).

**General appearance:** A wide, spreading tree with a rounded crown, found in dry to semi-deciduous, low-altitude woodland.

**Distribution and habitat:** Occurs in Swaziland, Mpumalanga, Limpopo Province, Mozambique and northwards to Kenya and Zambia. It is found in deciduous woodland along the base of the escarpment, often in areas of rocky granite hills. It generally occurs at lower altitudes compared to the superficially similar *F. burkei*.

**Meaning of name:** *Ficus* – Latin name for figs; *petersii* – named for Dr W.C.H. Peters (1815–1883), German naturalist and explorer who visited Mozambique from 1843–1847.

**Ecology and uses:** Fruits are eaten by a wide range of birds and bats.

**As a garden tree:** Peter's fig, like its close relatives (e.g. *F. burkei*), can easily be propagated from cuttings and truncheons. Prepare cuttings of  $\pm 200$  mm long, remove the bottom leaves, plant in river sand and keep moist. Place the truncheons in the shade for a few days and place river sand in the bottom of the hole before planting to prevent rotting. It is a fast grower and becomes a fair-sized tree very quickly. Young plants must be protected from cold winters for the first two to three years. Mature plants are moderately frost and drought resistant. It is frequently cultivated for shade and attracts birds to the garden.



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Biodiversity for Life  
South African National Biodiversity Institute

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# Minister hands over waste bins in Eastern Cape

By Zibuse Ndlovu



**Above:** Working on Water participants clean up the streets of Nkonkobe Local Municipality in Eastern Cape.



**Above:** The waste bins handed over by Minister Molewa will be distributed in local households for proper waste disposal.

The Minister of Environmental Affairs, Mrs Edna Molewa handed over 300 waste bins to Nkonkobe Municipality on Friday 24 June 2016, in Fort Beaufort, Eastern Cape.

Minister Molewa handed over the waste bins as part of the campaign to raise awareness and educate the community members on waste management. The Fort Beaufort community face serious challenges with regards to lack of proper waste management around the area, as evident on the extent of litter, and illegal dumping that poses serious health effects.

"In honour of this high level of awareness, despite the tight economic climate we operate in, my Department had to find a way of assisting and managed to purchase 300 bins which will be distributed amongst the households for proper waste disposal which will ensure that illegal dumping in the area is curbed," said Minister Molewa.

Our municipalities are the engine rooms of development: they are at the forefront of driving government's service delivery programme, and we are her because environmental conservation is a shared responsibility between national, provincial and local government in pursuit of a clean and greener South Africa.

The EC Youth Jobs in Waste project has employed nine beneficiaries in the Nkonkobe municipality, of which two are placed at the landfill site, one is an administrator and six are doing awareness campaigns assisting the municipality. "These beneficiaries received an NQF 2 accredited training in Waste Management. They have also received non-accredited training in First Aid, Health and Safety, Life Skills and Personal Finance," said Minister.

The Eastern Cape Closure and Rehabilitation of Fort Beaufort Waste Disposal Site project entails closing and rehabilitating the unlicensed waste disposal site as well as street cleaning in Fort Beaufort.

The General Household Survey 2014, which is aligned with the National Domestic Waste Collection Standards, indicates that the current number of South African households now with access to waste services stands at 75%. It is expected that this number will reach 80% by 2019.

"If one considers that this number stood at 55.4% in 2001 – the pace of the government's service delivery programme with regards to the provision of refuse removal services, has been impressive," Minister Molewa said.

Litter and illegal dumping are some of the most common problems in South Africa affecting all provinces alike irrespective of the size and extent of the area. The main source of litter is pedestrian or individual litter. This encompasses litter dropped by people whilst walking or driving in the Council area. Litter can also originate from waste collection or storage areas.

The Department, through its Environmental Protection and Infrastructure Programme (EPIP), has funded five projects in the area of Nkonkobe Local Municipality using labour intensive methods as per the requirements of the Expanded Public Works Programme (EPWP). "The objective thereof is ensuring that whilst addressing the challenge of environmental degradation, job creation, small business development and skills development opportunities are created," said Minister.

Mr Tyelovuyo Mthengana, a community member who received a waste bin said he was happy to have received the bin. "We are very happy for what the Minister has done. These waste bins will help us keep our area clean," said Mr Mthengana.



## About the contributor: Zibuse Ndlovu

Zibuse Ndlovu is the Assistant Director: Editorial Services at the Department of Environmental Affairs, within the Communications Chief Directorate.



# Working on Waste creates 3198 jobs in Eastern Cape

By Zibuse Ndlovu



Since its inception, the Working on Waste (WoW) programme has created 3197 job opportunities for the unemployed youth in Eastern Cape. The Eastern Cape MEC of Economic Development, Environmental Affairs and Tourism, Mr Sakumzi Somyo launched the programme on 23 June 2016, in Port Elizabeth, Eastern Cape.

Launching the Programme on behalf of Environmental Affairs Minister, Mrs Edna Molewa, MEC Somyo highlighted job opportunities created by the programme. "A total of 13829 work opportunities have been created through the programme in all nine provinces, of these, 3198 have been created here in Eastern Cape. A total of 9819 job opportunities, 71% of the sum have been created for the youth, 59% or 8159 work opportunities were created for women and 2,6% or 360 job opportunities were created for people with disabilities," said MEC Somyo.

The WoW programme seeks to address the problem of increased volumes of waste and the backlog in the provision of waste services especially in urban-informal areas, tribal areas and rural formal areas.

"The WoW programme also provides skills development, meaning that skilled people recruited into the project are taken through accredited training based on their education levels and career aspirations in order

to increase their chances of finding employment, self-employment and further training after participation in projects. On completion of the training, they receive accredited certificates of competency in various fields," MEC Somyo said.

The support provided through the WoW Programme includes but is not limited to installing and constructing of waste bins, sorting facilities, composting facilities, transfer stations, buyback centres, material recovery facilities, and landfill sites. "In addition, the programme also assists with capacity building for local government in terms of street cleaning, waste collection, landfill administration and operation, and waste recycling. This is achieved through recruiting, capacitating and placing the youth, women and people with disabilities in municipalities," said MEC.

In the 2014/15 – 2015/16 financial years, the WoW programme committed funding to 130 projects nationally to the value of R 1.2 billion and to date has successfully implemented a total of 85 projects. The Eastern Cape receives the largest portion of the budgetary allocation for the Working on Waste programme with R343 384 401-00 being ploughed into 20 projects until 2019.

Another environmental and job creation project in Ward 40 is the Working on Wetlands project .The

programme which began in June 2016 entails clearing of alien invasive plant species from the hillslope seepage wetlands which are important in providing a base water flow to the Chetty River. This project, which ends in March 2017, presently employs 30 beneficiaries, which comprises; 17 youth, 13 women and 2 people living with a disability.

According to the Programme Planning and Quality Assurance Director, Ms Nomfundiso Mtalana, the Working on Waste sub- programme has managed to provide support in development of waste management capacity in municipalities. "Through the programme a significant number of young people have managed to get employment opportunities and skills development through accredited training provided. They also contribute to the eradication of illegal dumping within their communities," said Ms Mtalana.

Ms Wendy Haas, one of the Working on Waste employees at Cokisa Consulting said the programme has changed her life. "This project has given me employment so that I can provide for my family. It has also provided us with the skills that we didn't have before, we thank the Department of Environmental Affairs for bringing such projects to the youth and to our community," said Ms Haas.

# Waste transfer station to create jobs for locals

By Madimetja Mogotlane



**Above:** MEC Seaparo Sekoati cut the ribbon that officially handed over the waste transfer station to the residents of Mathibela in Zebediela, Limpopo. With him from left are Kgoshi Madimetja Sello Kekana III and Mayor of Lepelle-Nkumpi Local Municipality, Cllr Ivy Phaahla.

The MEC for Limpopo Economic Development, Environment and Tourism Mr Seaparo Sekoati has assured the residents of Lepelle-Nkumpi municipality that the waste transfer station launched in their municipality will enhance the quality of life in most households by creating sustainable jobs. Mr Sekoati was speaking at the official handover of the waste transfer station in Mathibela in Zebediela in Limpopo on 23 June 2016.

“Through the EPIP programme, we aim to manage the unpalatable state of uncontrolled waste not only in the Lebogakomo area, but South Africa as a whole. In addition, this programme will enhance the quality of life in most households through the creation of sustainable jobs which are continuously being generated by the waste recycling economy.

We should from today start to see waste as money and not as heaps of litter which must be avoided. Let us all support the optimum use of this environmentally friendly waste disposal technology,” he said.

Mr Sekoati, who was addressing the residents on behalf of the Deputy Minister of Environmental Affairs, Ms Barbara Thomson said the transfer station would create a culture of environmental responsibility in the community.

“The transfer station will make solid waste collection more efficient and reduce the overall transportation costs, air emission, energy use, traffic and road wear & tear, and this saves the community money and lowers the cost of the solid waste management services. It will further assist the community to manage their solid waste especially garden waste and will solve the problems of waste being discarded all over which leads to environmental nuisance and impact on health of human beings,” he said.

The Mayor of Lepelle-Nkumpi Local Municipality, Cllr Ivy Phaahla said the transfer station will also be utilised to create awareness about how to deal with waste materials.

“As the Lepelle-Nkumpi municipality we would like to take this opportunity to thank Limpopo Economic Development, Environment and Tourism (LEDET) and the Department of Environmental Affairs for building this waste transfer station because it will contribute towards job creation in our municipality. We were requested to go green and we no longer burn rubbish because this contributes to gas emissions and carbon dioxide which is bad for climate,” she said.

Community member, Mr Ephraim Kanyane said he will benefit a lot as an entrepreneur and environmental activist. “I own a supermarket in the area and I used to experience lots of problems with disposing some of the rubbish left by my customers. I also used to hire a tractor to load rubbish to illegal dumping site in the mountain. Since the station is in my area, it will benefit us a lot as we were told of how we will be rewarded if we bring waste to the station. It is also our responsibility as residents to take care of our environment,” he said.



## About the contributor: Madimetja Mogotlane

Madimetja Mogotlane is a Senior Communications Officer, Internal Communications and Events in the Chief Directorate: Communications at the Department of Environmental Affairs. Mr Mogotlane is a former intern in Media Liaison at the Department and has journalistic experience.



# Understanding Waste Characterisation

By Thandeka Mandigora

**M**unicipal Waste Support has been rolling out training on waste characterisation since the beginning of 2016.

Waste characterisation is done in municipalities to gain a better understanding of the types and quantities of waste a municipality generates. It forms part of a key component that is associated with information management, which can then equip municipalities to devise strategies for waste diversion including contributing to Climate Change mitigation, Integrated Waste Management Planning (IWMPs) and the National Waste Management Strategy implementation.

Waste characterisation follows a process that includes these four steps:

1. Waste is randomly selected as it comes into the landfill site from the various settlement types (Municipalities are encouraged to ensure that waste from the different settlement types should be sampled). Key to note is that a sample is made up of 100 kg and that a municipality's sample is made up of 32 samples in total.
2. Once the 100 kg has been set aside, waste should be mixed and re-separated into various waste streams, for example, paper, glass, cardboard, etc.
3. A hand-held scale is used to weigh the various waste streams.
4. These are recorded and graphs including tables are generated to determine the quantities and types of waste that are generated in that particular municipality.

It is important to note that certain factors must be borne in mind, for example, seasonality, geographical areas and waste quantities from a weigh bridge, as these can influence the results of waste characterisation.

The Municipal Waste Support Directorate in the Integrated Waste Management & Strategic Support Chief Directorate is tasked with providing capacity building and training in order for municipalities to meet their waste service delivery mandate. It was established in order to act as an interface between the National Department of Environmental Affairs, provinces and most importantly municipalities. The promulgation of the Waste Act in 2009 and the development of the National Waste Management Strategy (NWMS) revolutionised the waste sector. For the first time a waste sector specific legislation was developed. This meant that various provisions which were not previously a requirement were to be put in place and thus space and a constant flow of information and capacity building was recognised as being a key ingredient if the waste sector was to achieve success.

The Directorate: Municipal Waste Support has in the past three years been running training modules targeting municipal officials and Councillors on an array of waste or chemicals management topics in order to capacitate them, clarify and simplify requirements and thus meet them half-way in ensuring that they will go on to ensure that communities are provided with effective and efficient waste management services.



## About the contributor: Thandeka Mandigora

Ms Thandeka Mandigora is a Control Environmental Officer within Municipal Waste Support. She has an Honours degree in Environmental Science and 12 years' experience in the industry.





# Government and private sector work to Keep Mzansi beautiful

By Tsebo Mohapi  
Images by Gaopalelwe Moroane



**Above:** Petrol attendant at Shell Samrand participates in the Anti-Littering Awareness Pilot campaign launched on 27 June 2016.



**Above:** As part of the pilot campaign, petrol attendants were also given training on how to sort out waste.

In the last week of June, the Department of Environmental Affairs (DEA) and the South African Local Government Association (SALGA) took to filling stations on the N1 to conduct a pilot Anti-Littering or separation at the source awareness campaign.

This campaign formed part of the Department's Environment Month activities. The targeted filling stations were between Johannesburg and Pretoria and they were Shell in Samrand, Caltex on New Road in Midrand as well as BP Oasis on Beyers Naude in Randburg.

On the day, filling station attendants, and officials from the Chemical and Waste management, SALGA and Communications handed out awareness material and engaged with patrons at the filling stations.

"The project's aim is to help curb the current waste challenge of littering, which is usually contributed by motorists along the routes. In addition to this there is a lot of travelling taking place along these routes as people travel to and fro their different work

destinations on a daily basis," said CWM's Ms Boitumelo Dlamini who was part of the team that took part in the pilot launch.

Another aim of the project is to facilitate and encourage good waste management practices in all citizens such that there is reduced littering and that waste quantities going to landfills are reduced through separation at source.

The DEA in a collaborated effort with SALGA and City of Johannesburg's Pik-it-Up also donated separation at source bins at all six filling stations. The petrol attendants were also given training on how to sort out the waste. The bins are for the four waste streams namely: cans, paper, glass and plastic.

"This is aimed at changing the behaviour and attitudes of motorists by educating and encouraging them to separate their waste into different categories," said Chemical and Waste's Ms Berneditte Moitsi.

Suggestion boxes were also placed next to the convenience stores at

the filling stations for community members to write down their concerns or comment on waste management issues. Below are just some of the anonymous suggestions that were received:

- "Anti-littering campaigns must be implemented at municipal levels where the communities are based and recycling should be promoted at that level to ensure that the recycling economy is accelerated."
- "The traffic department should start issuing fines to community members who illegally dump their waste in communal areas and those who dump waste through their windows while travelling on the roads."
- "There is not enough infrastructure (dustbins and waste removal) provided for the disposal of waste at some municipalities hence we are experiencing waste challenges such as littering and illegal dumping."



## About the contributor: Tsebo Mohapi

Mr Tsebo Mohapi is a Control Environment Officer in the Department of Environmental Affairs. He is responsible for general waste management, implementing plastic bag regulations and waste tyre regulations. He has 12 years experience in the field of waste management in the department.



# DM donates desks for Mandela Month

By Veronica Mahlaba



**Above:** The Deputy Minister of Environmental Affairs Ms Barbara Thomson handed over eco-desks and school shoes to learners of St Chad's High School in Ladysmith.

St Chad's in Ladysmith came alive during the Nelson Mandela Month celebrations when the Deputy Minister of Environmental Affairs, Ms Barbara Thomson handed over 60 eco-desks at St Chad's High School. The celebrations were held on 29 July 2016.

In July, South Africans embrace the chance to celebrate former president Nelson Mandela's life for the whole month. This gives everyone the opportunity to do a good deed and change the lives of the people around them.

Speaking at the celebrations Deputy Minister Thomson encouraged the learners to start the culture of helping each other at a young age to improve the lives of the less fortunate. "We are here today to walk in the footsteps of Tata Nelson Mandela. We are here to support where there is need as Tata never wanted to see people lacking. Additionally to

the eco-desks we brought, we also brought 39 pairs of school shoes. A show of kindness doesn't necessarily need money but your willingness to help each other by any means you have," said Deputy Minister Thomson.

Deputy Minister Thomson further appealed to the learners, educators and the community at large to look after the desks. "These desks are not just for you but for many other learners that are yet to enrol on this school, coming from this community," she explained.

The Deputy Principal of the School, Ms Khanyisile Mdluli thanked the Deputy Minister and stated that the school was in great need of the desks. "These desks will lessen the problems we have in the school. Many learners in this school come from child headed households or they are taken care of by their grandparents, so the new school shoes will help to take some

of the burden off the families and the learners," Ms Mdluli said.

The eco-desks are made out of biomass from cleared alien invasive plants and manufactured by the Department of Environmental Affairs' Eco-Furniture programme in partnership with the Department of Basic Education and is implemented through the South African National Parks.

Upon receiving his school shoes, Mr Sphesihle Ntuli a grade 12 learner said he is very happy because he will now concentrate on his studies. "The shoes will help me walk better the long distance I take to school and I won't feel ashamed anymore about the shoes I am wearing," he said.

To continue with the Nelson Mandela Month celebrations, Deputy Minister Thomson also visited Vryheid to donate blankets to the needy community of eMondlo.



# Minister Molewa celebrates Nelson Mandela Day

By Tshepiso Rampho  
Images by Paul Sigutya



**Above:** Minister of Environmental Affairs Edna Molewa and the Deputy Minister of Rural Development, Mr Mcebisi Skwatsha donate school bags to learners at Mseki Primary School in Gugulethu.



**Above:** Minister of Environmental Affairs, Mrs Edna Molewa paints Mseki Primary School in Gugulethu.



**Above:** Minister Edna Molewa with Deputy Minister of Rural Development, Mr Mcebisi Skwatsha, the educators and learners of Mseki Primary School.

The Minister of Environmental Affairs, Mrs Edna Molewa emitted the spirit of utata Nelson Mandela as she donated school desks, uniforms to two local schools. The minister also donated walking sticks and blankets to the community of Gugulethu during the Nelson Mandela Day celebrations held in Cape Town, on 22 July 2016.

The annual International Nelson Mandela Day of humanitarian action in celebration of the former statesman's life and legacy was declared by the United Nations in 2008 in order to encourage individuals to change the world through voluntary community work. Eight years later, the Mandela Day has gained worldwide support as an annual celebration of the beloved peace icon and a global call to action for people to inspire change no matter where they are. Commemorating the day hopes to highlight and implement the values that the former president shared and these values include democracy, equality, diversity and respect.

The day's festivities began with a clean-up campaign which created awareness around waste management issues within the community. Meanwhile, Minister Molewa dedicated her morning to painting Mseki Primary School and engaged with a classroom full of cheerful learners. After a brief exchange with the young pupils about potential careers within the environment sector, the Minister also donated brand new school bags packed with lunch boxes to the learners. The programme commenced at the Gugulethu Indoor Sports Complex where the Minister reminded the audience that they are all heirs of the great legacy of Nelson Mandela.

The school desks and walking sticks are manufactured as part of the Eco-Furniture Programme which seeks to make optimal use of the alien invasive biomass cleared through the Working for Water programme. Through this programme work opportunities are created and the environment is protected.

Earlier in the week, the department had hosted a two-day Environmental Science Careers Expo at the Ikhwezi Community Centre. The informative and entertaining exhibitions from various DEA internal and external stakeholders afforded young people the opportunity to engage with experts regarding the multi-faceted world of Environmental Sciences.

During her key note address, Minister Molewa explained that, "The focus of this year's campaign is on education and literacy, food security, shelter and the environment. The Department of Environmental Affairs has chosen to focus on providing the youth of South Africa with opportunities to learn more about careers in the environment sector, engage with people who litter to convince them of the value of clean surroundings and assist communities to organise the clean-ups of their local parks, rivers, beaches, streets, town squares or sports grounds. Our children deserve to grow up in a clean and healthy environment," she said.



## About the contributor: Tshepiso Rampho

Ms Tshepiso Rampho is an Internal and External Communication intern at the Department of Environmental Affairs in Cape Town. She holds a BA Honours in Communication Theory from the University of Johannesburg with experience in social media management and photography.





# Environmental studies graduates recognised for their achievements

By Madimetja Mogotlane

Scores of learners who completed their environmental practice learnership programme were commended for their achievements during a graduation ceremony held on 24 June 2016 at the Capricorn TVET College in Limpopo.

Handing over the certificates to the 92 graduates, the MEC for Limpopo Economic Development, Environment and Tourism Mr Seaparo Sekoati praised the graduates for their hard work and dedication. "You have worked hard, spending months learning new skill sets. Our complex socio-economic, environmental and technical world today requires education and skills that were not needed in the past," he said

MEC Sekoati officiated the ceremony on behalf of the Deputy Minister of Environmental Affairs, Ms Barbara Thomson.

Mr Sekoati said the environmental skills acquired by the learners will go a long way in assisting their communities to gain more understanding about environmental issues. "I am sure many of you have firm plans and have a good idea of what is coming next and what you are going to do. You are now armed with one of the most important tools needed to forge your path ahead. It is not the certificate itself that counts but what you have learned



**Above:** Above: Ms Reneilwe Dibakwane from Bushbuckridge Municipality in Mpumalanga receives a certificate of competence from The MEC for Limpopo Economic Development, Environment and Tourism Mr Seaparo Sekoati during the Environmental Learners Graduation Ceremony at the Capricorn TVET College.

along the way and what you do with the education you have received in your journey to graduation," MEC said.

The programme offers an official SAQA accredited experiential learning over a period of 12 months with a minimum of 140 credits and equips South African youths with the skills, knowledge and understanding required in terms of the new local government competency framework for environmental occupations.

Dr Thakhani Takalani from the University of Venda reminded the graduates of

their role as the custodians of the environment when it comes to green economy issues.

"You are one of the key economic pillars when it comes to the green economy issue. So you are the soldiers to advance the green economy. Today you are graduating and I think you are going to change the environment of your local municipalities. Go out there and be champions of change," he said.

Local Government Sector Education and Training Authority Provincial Coordinator Ms Margaret Marakalala, said the graduation of learners shows that the sector is reaping the rewards of its investment across all the municipalities in Mpumalanga and Limpopo Province.

"In early 2014 Local Government SETA partnered with the Department of Environmental Affairs to fulfil our mandate to facilitate skills development across all the municipalities in South Africa and train 100 unemployed learners from both Mpumalanga and Limpopo Province. Today we have been brought together by the success of our learners. It gives me great pleasure and gratitude to see this investment creating a positive impact in the people of South Africa," she said.



# Kruger National Park Drought

By SANParks

**B**y the end of February 2016, Kruger National Park (KNP) had recorded approximately 36% of the average long-term rainfall for the past rainfall season (for example, ~155 mm measured on average across KNP rainfall stations since 1 July 2015). Considering these far-below average conditions and the predictions for the remainder of the rainfall season, it seemed likely that the 2015/2016 rainfall season was going to be the driest ever recorded in KNP.

The previous driest year on record for KNP was in 1991/1992 when 44% of the long-term average rainfall was recorded. What made this drought even more significant is the fact that rainfall in the preceding rainfall year was also considerably below-average (~65% of average), and much lower than what it was preceding the 1991/1992 drought (~ 90% of average). It was fair to state that KNP was about to have its most severe drought since rainfall recording started in the park in the early 20th century.

However, in early March, widespread rainfall was recorded over much of Kruger and surrounding catchments – within days empty dams filled to the brim, seasonal rivers started flowing for the first time in two years, perennial rivers flowed bank-to-bank and seedlings emerged everywhere. Does this mean the drought is over?

**“The previous driest year on record for KNP was in 1991/1992 when 44% of the long-term average rainfall was recorded.”**

By no means! Although surface water is more available in the veld now than a month or two ago, the old saying remains true: “it does not rain grass”. Just as it gets too late to plant mealies, it gets too late to get a decent grass layer. A common misconception is that animals die of thirst during a drought, when in fact most mortalities are due to starvation. Rivers have

also by no means “recovered” after the widespread and in some cases abundant rains of March (e.g. Mooiplaas and Pretoriuskop rainfall stations measured over 200 mm in March). By mid-April some of the perennial rivers have already returned to levels similar to before the March rainfall events, whereas the other rivers are dropping fast. These conditions will worsen during the coming winter months. Kruger, surrounding communities and Mozambique will be dependent on releases from upstream dams to ensure adequate flows in rivers. Unfortunately most of the catchment dams have on average not filled by more than 1-5% after the “good” rains of March. Therefore, from a rivers perspective, the rainfall of March can be seen as some temporary “pause” in the drought, but by no means an end to the drought. It will be important for Kruger and its surrounding neighbours and stakeholders to maintain constant dialogue in order to jointly manage (e.g. through water restrictions and dam releases) the shared resource in the coming dry winter months, ensuring equitable access for all.







**Above:** SKUKUZA – The drought took its toll on the Kruger National Park (KNP). Visitors to the park were devastated by the sight of four dead hippos which had seemingly died because water, and consequently food, is running out.

These statistics, as well as a drive through certain areas of the park, triggers many questions from visitors and the general public. What is the park doing to manage/mitigate the drought effects? Are animals dying? How is tourism affected? Before answering these questions, one needs to take a step back and get perspective on the role droughts play in largely natural and open-systems like the KNP. Although the effects of droughts are negative for agriculture

and many associated livelihoods, droughts have a natural and important regulatory role to play in systems like KNP. For example, buffalo numbers in KNP were ~30 000 before the 1991/1992 drought, and fell within two years to ~14 000. Since then their numbers have increased again to more than 45 000 in 2015 (highest ever recorded), and will, as with the previous drought, most likely show a significant decline. During droughts a common reaction by the public is to think that management should provide more waterholes. Although some artificial waterholes are condoned in KNP, a wide-scale and dense network of borehole-fed waterholes will most likely increase herbivore mortalities and increase the

impact on vegetation. In fact, some areas far from water are necessary in order to ensure that food remains in these “refuge” areas for healthy, strong and less water dependent species to utilize. If water is too widely provided, then food resources get depleted sooner.

Tourism facilities are unaffected and contingency plans are in place to ensure that adequate and clean water will continue to be available to visitors and staff. Game viewing opportunities especially of predators are currently exceptional due to high visibility (i.e. less vegetation cover). As such, tourists are encouraged to keep visiting the park. Visitors are urged to always use water sparingly, as water remains a scarce resource in South Africa. As food in the veld becomes scarcer, tourists should also take extra care around primates, as these animals will become bolder and more determined to get hold of human food and waste at rest camps and picnic sites.

KNP managers and scientist are monitoring various aspects of the drought. This includes field and satellite monitoring of vegetation condition, aerial surveys to determine distribution of animals and surface water, as well as monitoring of river flows. However, since Kruger manages for healthy ecosystems and not for healthy individual animals or plants, limited direct management intervention is anticipated and nature will be allowed to take its course.





# CITES and Marine Species

## How do CITES listings help marine species?

The aim of CITES is to prevent species from extinction resulting from unsustainable international trade, by putting in place specific regulations and requirements into the export/import process to ensure the export of specimens is biologically proven to be sustainable. Thus, CITES listings of marine species would provide these protections for marine species in international trade – particularly where existing management regimes have not been sufficient thus far to ensure the trade is sustainable.

Implementation of marine CITES listings has raised challenges but, in the case of sturgeons and queen conch, humphead wrasse and seahorses in particular, these listings have led to agreed measures to reduce unsustainable and illegal trade.

In the case of sturgeons, CITES Parties have agreed to a comprehensive labelling system to trace caviar through the market chain, and have agreed only to accept imports when the exporting countries publish annual quotas (there is currently a zero quota for beluga sturgeon, the most valuable species). In addition, CITES listings help poorer exporting countries to secure donor funding to put the exploitation of those species on a more sustainable footing (again, in the case of sturgeons, the EU funded work on these species in the newer Member States and in other eastern European countries).

Because of the focus, in the past, on terrestrial species by CITES, it has been argued that CITES authorities lack the expertise to implement marine listings. However, countries have responded to this technical challenge by designating appropriate national fisheries bodies as management and/ or scientific authorities under the Convention so that the expertise of those bodies is harnessed in implementing the listing. This strengthens the effectiveness of the listing and, over time, should show clearly that CITES is a complementary management tool to existing fisheries arrangements.

In addition, more CITES participating countries are including fisheries officials in the CITES delegations because of the increasing focus of CITES on aquatic species.

None of this is to argue that there are no ongoing problems with these species but the situation is undoubtedly better than it would have been without CITES listings.

## Why do marine species engagements

In the past, instead of considering such proposals, Parties have become polarised over the question of whether to accept such proposals at all. Parties that oppose the listing often cite conflicts with the role of FAO and Regional Fisheries Management Organisations (RFMOs).

Parties which support the listing argue that their role is to prevent CITES from intervening with respect to marine species in situations where there are no existing international agreements, or those in place are deemed ineffective.

## What about Regional Fisheries Management Organisations (RFMOs)?

It is sometimes argued that a CITES listing is not sufficient to mandate management of the relevant species. In fact, many species, including some, such as basking shark and European eel, are not actively managed by any RFMO or, if so, are poorly managed.

Moreover, even when an RFMO is mandated to manage a species (e.g. ICCAT with Atlantic bluefin tuna), it cannot be assured that it will do so.

An independent review commissioned by ICCAT in 2002 found that it does not follow the advice of its own scientific Committee.

However, the strongest argument for the involvement of CITES is to complement the work of RFMOs by regulating trade in species that are not actively managed by any RFMO or, if so, are poorly managed.

African blind barb fish



Giant clams



Queen conch



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# Species

## Why such strong debates?

On their individual merits, the debate has been appropriate in principle for CITES to consider listing of marine species under CITES argue that it is the responsibility of Regional Management Organisations (RFMOs).

There is nothing in the convention that precludes listing of species if they meet the listing criteria, particularly where additional management measures for the affected species are in place.

## RFMOs)?

It is not appropriate, in cases where an RFMO is not in place, many of the species considered by CITES – such as the Atlantic eel, for which listings have been adopted – are only managed over part of their range.

It is not appropriate to manage the species in question (as in the case of the Atlantic eel) if it is assumed that the management is adequate.

It is criticized that body for consistently failing to take appropriate action.

The main concern of CITES in these cases, is that it can

## What is meant by “lookalike issues” in relation to marine species?

Many of the marine species debated by CITES are ones whose primary use is for food. In such cases, opponents often argue that the difficulty of identifying the products in trade renders the listing impossible to implement.

While this is a legitimate concern, its significance can be overstated. The kinds of species usually considered by CITES are high value species that are often marketed in a manner that makes them readily identifiable in order to command higher prices (for example, no-one would market sturgeon caviar as lumpfish caviar).

Furthermore, the text of the CITES Convention recognises that it is sometimes necessary to list regulate trade in certain additional species in order to avoid a situation whereby species that are listed on Appendices I and II because of real conservation concerns are traded fraudulently as non- CITES species that are similar in appearance. For example, all orchids (except the vanilla orchids) are listed on Appendix II in order to ensure that those that are at real risk from international trade are not laundered as more common species.

The impression is sometimes given that lookalike listings can be imposed against the will of Parties once the first relevant species has been listed on conservation grounds.

Of course, this is not the case; they have to be agreed in the same way as all other listing proposals – i.e. by meetings of the CoP – so that relevant issues, including proportionality, can be taken into account.

American paddlefish



Basking shark



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# SANBI makes SA shine at Royal Chelsea Flower Show

By Lebohang Majara



**Above:** Mr David Davidson, Ms Lihle Dlamini, Mr Ray Hudson and Ms Sthembile Zondo.



**Above:** The winning SANBI stand at the RHS Chelsea Flower Show 2016, in London.

On 31 May, @SANBI\_ZA trended on twitter in South Africa at the announcement of the South African National Biodiversity Institute (SANBI) winning a gold medal for their Harold Porter National Botanical Garden themed exhibition, designed by David Davidson and Ray Hudson, at the prestigious Royal Horticulture Society (RHS) Chelsea Flower Show in London!

What was started in 1976 as an image building initiative by the Department of Foreign Affairs, has resulted in 34 Gold Medals in 41 years of exhibiting at the prestigious RHS Chelsea Flower Show! In 1995 government sponsorship was ended in favour of other diplomatic expansion programs, since then, South African's participation at exhibit has been sponsored by various corporate entities and supported by numerous volunteers.

South Africa has such unique floral kingdoms with rich diversity and showcasing this natural asset has proven to be an undeniable tool magnet of tourism to South Africa. Lihle Dlamini, Director of Marketing and Communication at SANBI elaborated, "Once again the important role that botanical gardens play in contributing to the country's

## Home town: Verulam, KwaZulu-Natal

About Harold Porter National Botanical Garden – Tranquillity between mountain and sea

The garden is the town of Betty's Bay, squeezed between the southernmost tip of the African continent where the Indian and Atlantic Oceans meet, and the Boland Mountain Complex. The garden is renowned for its waterfalls and amber pools, showcases more than 700 species of indigenous South African plants, and trails of varying degree of difficulty. Ten hectares of the cultivated garden has wheelchair-friendly paths.

## About the Kogelberg Biosphere Reserve - the Cape Floral Kingdom's model sustainable living environment

What is pleasantly striking is that there are "no fences to keep 'people' out and 'nature' in". The magnificent landscapes and unique biodiversity are entirely conserved by the local communities, farmers, conservation agencies and local government.

tourism statistics is underscored. Our exhibit provides a snapshot to the country's botanical heritage and many people decide to visit our country after seeing what we have on offer as a country."

Of note, is the fact that the event is a celebration of spring, whilst we are going through late autumn in the southern hemisphere. We therefore, take advantage of the treasures of fynbos flowers from the Cape Floral Kingdom, which are flowering during winter. Dr Tanya Abrahamse explains, "The plants from the Harold Porter National Botanical Garden, located as it is within the Kogelberg Biosphere Reserve, are unique. This is a place of such natural beauty and complex floral diversity to be recognised as perhaps the world's greatest biodiversity hot-spot. It was a privilege to be able to recreate such bounty, at Chelsea."

This year, we celebrate the designers and volunteers, Lihle Dlamini, Alice Notten (Interpretation Officer at Kirstenbosch National Botanical Garden) and Sthembile Zondi (Horticulturist at KwaZulu-Natal National Botanical Garden), volunteers who travelled from South Africa and South Africans currently based in London who worked hard to achieve the 34th Gold medal.



## About the contributor: Lebohang Majara

Lebohang Majara is the Science Communicator in the Marketing and Communication Directorate of the South African National Biodiversity Institute (SANBI). She was previously a pioneer in the Groen Sebenza project, incubated by SANBI.



# iSimangaliso – it's about people

By Zakithi Mngomezulu



The iSimangaliso Wetland Park's Rural Enterprise Accelerator Programme (REAP) is a partnership initiative with Raizcorp, the World Bank and Global Environmental Facility. It is fast becoming a significant catalyst in transforming aid-dependency by providing community entrepreneurs with training, mentorship and seed capital for businesses. It enables community-owned businesses to leverage opportunities in iSimangaliso and ignite a cycle of job creation and economic growth.

Bringing real benefits to one of the poorest and most underdeveloped regions in South Africa, the programme now supports some 187 entrepreneurs – a significant and rapid growth from the 30 who started six years ago. To date, 80 grants to the value of over R7.8 million have been awarded to businesses.

iSimangaliso's natural value is in sharp contrast to its local context of human poverty. Of the 640 000 people living around iSimangaliso, over 80% live below the poverty line and only 15% of the economically active population is formally employed. There is a strong dependence on single bread-

winners, migrant household members and state welfare.

To be resilient and have choices in the face of rapid global and climate change, this place of international importance needs to maintain its relevance locally. iSimangaliso's strategy to create this necessary resilience has been the 'rewilding' of the Park. It's a model for conservation that tackles the large-scale restoration of complex natural ecosystems at the same time as improving the quality of life of the people in whose hands the future of the Park belongs. The latter is predominantly driven through inclusive conservation practices such as skills development programmes in the areas of art, craft, hospitality, tourism, and job creation initiatives in land rehabilitation and construction.

"iSimangaliso's programmes prepare people for employment and make them more employable in an area where there are too few businesses and many of those that do exist remain marginal. It is about replacing dependency with entrepreneurship and decent jobs," comments iSimangaliso CEO Andrew Zaloumis.

The programme comprises training sessions and mentoring through a business hub as well as access to grant financing. It has mentored – and provides ongoing support – to some 187 entrepreneurs including tourism businesses, restaurants, catering and food businesses, cattle farmers, education, hair salon owners, technology services, small general dealers, photographers and transport operators. A further 30 participants have just embarked on their programme. In the first round, iSimangaliso received 100 applications. In the last recruitment process, 2000 applications were received from the seven municipal districts that abut the Park.

## For Park information visit

[www.isimangaliso.com](http://www.isimangaliso.com), contact [info@isimangaliso.com](mailto:info@isimangaliso.com) or call 035 590 1633. Follow us on Twitter, Instagram, Facebook and Youtube, or visit our website at [www.isimangaliso.com](http://www.isimangaliso.com).

Media enquiries should be directed to Bronwyn Coppola +27 83 450 9111 or [bronwyn@abetterworld.co.za](mailto:bronwyn@abetterworld.co.za).



## About the contributor: Zakithi Mngomezulu

Ms Zakithi Mngomezulu is the Technical Officer: Entrepreneurship Development Programme. She has an Honours Degree in Geography and Environmental Management from the University of KwaZulu-Natal and is passionate about rural development.



# Drought and floods

What to expect during the summer months of 2016

By Hannelee Doubell



**Above:** After heavy rainfall in Gauteng the Hennops river burst its banks.

South Africa was heavily affected by the El Niño event that brought severe drought and hardship during the 2015/16 summer season. An El Niño event is characterised by an upwelling of a large amount of warm water in the eastern Pacific Ocean (due to a change of direction of the so called “trade winds”) at around Christmas and is dubbed by the Spanish speaking countries such as Peru as “El Niño” (pronounced El Ninyo) – meaning “boy child”. South Africa’s climate is also affected by other factors, such as the conditions of the surrounding oceans, these

**“the current drought is the result of a sequence of dry spells and extreme hot conditions associated with the very strong 2015/16 El Niño event and preceding drier than normal years, especially over the central parts of South Africa.”**

need to be taken into account when a seasonal forecast is made.

The South African Weather Service’s (SAWS) Long Range Forecasting

Group meets on a monthly basis to analyse various seasonal forecasting models in order to determine the state of the atmosphere and oceans. For South Africa, clearer signals for the coming summer season normally appear during the August/September seasonal assessments.

As at the beginning of August 2016, most parts of South Africa are still experiencing drought conditions and presumably under water stress, despite the fact that the strong El Niño event of 2015/16 is fully dissipated. According to Dr. Asmerom Beraki of SAWS, “the current drought is the



## About the contributor: Hannelee Doubell

Hannelee Doubell works for the South African Weather Service: Corporate Communications department.



result of a sequence of dry spells and extreme hot conditions associated with the very strong 2015/16 El Niño event and preceding drier than normal years, especially over the central parts of South Africa. The recovery of South Africa from drought conditions may take some time, depending on rainfall and temperature conditions over the coming spring through summer 2016/17 season”.

While scientists have detected early signals for the development of a weak to moderate La Niña (meaning “girl child” in Spanish) development towards the spring/summer season 2016/17, the rate of change of the sea surface temperatures over most of the equatorial oceans and the anticipation of La Niña development largely weakened to such an extent that the possibility of neutral conditions may not be completely ruled out. When neutral conditions occur, the forecasting of particular wet or dry seasons becomes difficult. However, at the moment SAWS remains carefully optimistic that we will experience an improved rainfall season during summer.

One of the less known aspects influencing our spring/summer rainfall, is the so-called “Indian Ocean Dipole”. Currently, the Indian Ocean Dipole (IOD) shows a tendency of a negative to neutral phase development toward the spring season. According to Dr Beraki, this means that for spring, the transport of moisture from the Indian Ocean to

Southern Africa would be suppressed – in other words no significant early rainfall would be expected. Should a neutral IOD develop, the effect would be minimized.

It is clear that there are currently a number of uncertainties as to whether a fully-blown “wet” season, associated with a so-called “La Niña” event, can be expected. At this stage, SAWS is still monitoring the conditions and it will keep on reporting its latest findings on a monthly basis on its website [weathersa.co.za](http://weathersa.co.za)

### Becoming a WeatherSMART nation

While we join all South Africans in hoping for a much better rainy season, SAWS also cautions that the weather in South Africa can cause many hazards and the public always needs to be aware of those dangers. The vision of the South African Weather Service is to create a WeatherSMART nation that is Safe, More informed, Alert, Resilient and receives information/acts Timeously.

To be safe, one must heed the weather forecasts (be more informed) and not underestimate the power of thunderstorms; lightning; hail; snow; very strong winds and heavy rains – therefore, being alert to the dangers. On a practical level, in order to prevent local flooding or damage to one’s house, one can ensure that all gutters are cleaned and free of obstruction. Spring might be a good time to fix those leaking roofs and blocked drains.

As we have seen over the past few months, severe weather can be fatal. For this reason, the public is urged to take the following cautions:

- Do not cross bridges that look flooded by car or by foot – you might get swept away by the force of the water.
- Seek shelter during thunderstorms – lightning is almost always associated with thunderstorms and can be fatal.
- When you hear thunder, always seek shelter from lightning dangers in a well-earthed permanent structure.
- Always remember that a severe thunderstorm could produce a tornado – although this is still not so frequent in South Africa, but it does happen.
- Disconnect all electrical appliances during thunderstorms.
- Keep your head lights on and windscreen clean in thick and dense fog conditions.
- Do not throw glass bottles in the veldt as they can start a fire. Report any fires immediately.
- Dress in light-weight clothes and drink plenty of water during hot conditions.
- Limit physical activity during very hot conditions.





## Leadership Profile:

# Frances Craigie flying the South African flag high

By Beatrice Makgwale

Ms Frances Craigie is the Chief Director: Enforcement in the Department of Environmental Affairs. Her task is to make sure the environment is protected and preserved for future generations. She is a woman of many qualities and has been part of the Environmental Management Inspectorate or Green Scorpions since its inception. She is currently representing South Africa internationally as part of International Criminal Police Organisation's Environmental Compliance and Enforcement Committee Advisory Board and she has been elected to be on the board the second time for another two-year term, as Vice Chairperson. We spoke to Ms Craigie about her role on the board and her leadership position in the department.

### What is INTERPOL?

Interpol is the international policing organisation that involves the world's policing organisations and deals specifically with crime issues. Its aim is to bring together the police and other law enforcement agencies from different countries to fight crime more effectively. Each member-country has its own INTERPOL office, called a National Central Bureau (NCB), which connects that country's police force with the other members. They share information with each other and have access to a variety of high-tech tools and resources.

### How do you feel about being elected again?

I am humbled by it and am honoured that our contribution is being recognised. It also made me realise that as South Africa and Department of Environmental Affairs (DEA) we really have something to give at that level. It means that for the next two

years we will contribute at a strategic level and see how we can strengthen linkages with other countries. It also provides a platform to highlight the work that we are doing both as a Department and as a country.

### What is the role of the advisory board?

The main role of the Advisory Board is to provide strategic direction and advice to Interpol at an executive level in order to create a better global environment by sharing best practice with other environmental regulators on environmental compliance and enforcement and to reduce environmental crime through active sharing of intelligence and enhancing the capacity of others to help combat crime.

### What is the most significant lesson you have learned since becoming part of the Interpol?

My eyes were opened more since I became part of the Advisory Board, and it made me realise that crime cuts across all countries in a similar way. It also made me realise the importance of working together, and that we need to combine our efforts in order to fight environmental crime more effectively across the world. INTERPOL brings us together and links us with other countries to ensure collaboration and joint investigations, for example a rhino might be

poached in South Africa but the horn can end up in Asia - we need to disrupt these illegal activities through effective law enforcement.

### What can community members do to help prevent environmental crimes?

There are small, simple things one can do, like providing us with information, of any suspicious crimes around their communities. We as law enforcement officers cannot be everywhere all the time, the community is our eyes and ears, and we need them in order to fight environmental crimes (including those related to waste and pollution, wildlife and biodiversity as well as oceans and coastal matters). Also, we can make a difference in our daily lives by reducing litter, putting waste in dustbins, and making sure we don't throw rubbish into rivers. We need to look after our environment - it is everybody's responsibility.

## Quick facts

**Home town** – Johannesburg

**Book** – Forensics: The Anatomy of Crime by Val McDermid. It's a lot like Forensics 101 and not as serious as it sounds.

**Music** – Pink, Jason Mraz.

**Role Model** – Nelson Mandela.

Members of the public are encouraged to continue to report environmental incidents and crimes to the 24 hour hotline 0800 205 005.





# SA and Sudan explore relations in environment

By Veronica Mahlaba



**Above:** The Minister of Environmental Affairs Ms Edna Molewa and the South Sudan Minister of Environment and Tourism Ms Jemma Nunu Kumba.

A bilateral meeting to explore further relations in the field of environment took place between the Minister of the Department of Environmental Affairs, Mrs Edna Molewa and the Minister of Environment and Tourism in South Sudan, Ms Jemma Nunu Kumba. The meeting was held at the Environment House on 21 June 2016.

The purpose of the bilateral meeting was to share experiences and explore further relations in the field of Environment. South Sudan is a young government and would like to learn more from South Africa's experiences in establishing governmental structures, developing policies and legislation as well as setting up of systems and processes for effective environmental management.

Minister Molewa indicated that the purpose of the visit was to share lessons with Sudan and create an opportunity

for them to learn from South Africa's experience. "The two Ministries should ensure socio-economic growth and benefit in their respective countries. I am looking forward to establishing a Memorandum of Understanding from this discussion that is starting today.

The modalities of the MoU can be discussed at a later stage," she said. South Sudan's Minister Kumba stated that they want to learn from South Africa's experience. "South Sudan has the biggest wetland in Africa, which happens to be the 3rd largest in the world. It has a huge number and diversity of fish species, birds, elephants, rhinos, etc. This huge wetland needs to be properly managed with proper structures and resources. The Wetland has already been declared a world heritage site and UNESCO is working with the country on the improvement of management structures," stated Minister Kumba.

Policy Analyst in the Directorate: Africa and Bilateral Relations, Ms Sibongile Mavimbela stated that Minister Molewa suggested that a technical team from both countries must be set up to start working on the MoU. "The two Ministers will thereafter sign it. Minister Molewa appointed me to be the focal point for the technical team for South Africa, and that I must liaise with the South Sudan counterparts to get their team members," explained Ms Mavimbela.

After the deliberations Minister Molewa and Minister Kumba with their respective delegates had a tour of the Environment House. The first Government Green Performing Building, setting sustainable building standards for the construction sector in South Africa. The South Sudan delegation also had a taste of being driven in a DEA's Green Car.



# Ethekwini and Mossel Bay triumph at 2016 GMC Awards

By Gaopalelwe Moroane



**Above:** Mossel Bay Municipality's Mr Sivuyile Mtila (holding the trophy) accepts the award on behalf of Mossel Bay for being the Greenest Local Municipality at this year's Greenest Municipality competition.



**Above:** The Deputy Minister of Environmental Affairs, Ms Barbara Thomson awards eThekweni Municipality for being the Greenest Metropolitan Municipality at this year's Greenest Municipality awards.

**E**thekwini Metro Municipality and Mossel Bay Local Municipality came out as the two top performers at the 2016 Greenest Municipality Competition awards conferred in Middelburg on 6 July 2016. The awards were announced by the Deputy Minister of Environmental Affairs, Ms Barbara Thomson, with the support of Mpumalanga Member of Executive Council (MEC) for Agriculture, Rural Development, Land and Environmental Affairs Mr Andries Gamede as well as the mayor of the host municipality, Steve Tshwete Municipality, Councillor Mike Masina.

"Municipalities are central to the success of any initiative that seeks to address the challenges of climate change. They have direct control over carbon emission because this is where the main Green House Gas (GHG) emitters are located. It is also where those most vulnerable to climate change effects reside," said the Deputy Minister.

The overall winners received R3.5 million, first runner-up R3 million and the second runner-up R2.5 million each. Prize monies will be given through funding for infrastructure projects aimed at protecting the environment. The prize is tied to implementation of Waste, Climate

Change and Green Economy related job creation projects.

Municipalities are awarded after a site visits are convened by panel members from both national and local government to all participating municipalities. A criteria looks at the following elements: Waste Management; Energy Efficiency and Conservation; Water Management; Landscaping, tree planting and beautification, Public Participation and Community Empowerment and Leadership and Institutional Arrangements.

## Mossel Bay Municipality

In order to manage waste more efficiently, Mossel Bay Municipality has established Swop Shops where participants bring in recyclables and received household goods in return. The municipality has launched number of awareness raising initiatives such as the "Wise up on waste" campaign which is done in collaboration with the district municipality.

## Ethekwini Municipality

An assessment of the winners in the Metro category, Ethekwini shows that Ethekwini is just as serious about waste management in the City. The metro

has recycling stations along the beachfront at 50 meters distance. They also have recycling stations at all their offices.

The 20 Metro municipal buildings are fitted with motion detectors for lighting. All of these buildings were retrofitted with LED lights. Furthermore solar geysers have been installed in a lot of the township areas.

Deputy Minister continued to encourage municipalities who have not participated in the Greenest Competition to do so, "If there are challenges from non-participating municipalities, we should discuss them, find solutions and move forward together," she said.

Municipalities looking for information on how to participate in the Greenest Municipality Competition are invited to contact the officials below:

Ms Pontsho Pakkies:  
ppakkies@environment.gov.za  
012 399 8977

Mr Mandla Shabangu:  
mshabangu@environment.gov.za  
012 399 9944

Ms Mapato Baloyi  
mbaloyi@environment.gov.za  
012 399 9995

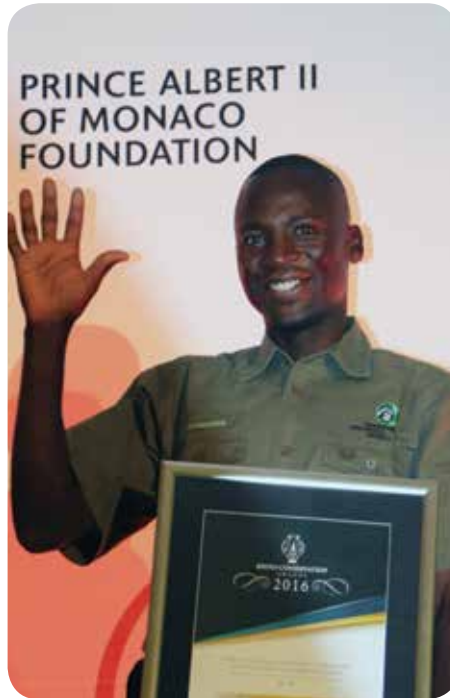


# Rhino conservationists praised at annual Rhino Awards

By Gaopalelwe Moroane



**Above:** Best Field Ranger: winner, Mr Anton Mzimba.



**Above:** Mr Sylvester Kaphamba, who was second Runner up in the Best Awareness and Funding category accepts his award at this year's Rhino Conservation Awards.



**Above:** Best Conservation Practitioner winner, Mr Mark McGill.

It was a heroes gathering on the evening of the 11th July 2016 at Montecasino, Fourways in Johannesburg when the annual Rhino Conservation Awards were held. The Awards have been held annually since 2012 and serve to recognise the individuals and organisations that fight to protect Africa's remaining rhino population. This year, the Deputy Minister of Tourism, Ms. Tokozile Xasa joined the heroes on behalf of Minister Edna Molewa. In her address Deputy Minister Xasa said, "Each and every one of you have made outstanding contributions to saving our rhino, to the increase in the numbers of those prosecuted and convicted of rhino poaching related offences, and to the protection of this iconic species from extinction in general."

The audience also took a moment to pay homage to SANParks ranger,

the late Enos Mabila, who was killed in the Kruger National Park (KNP) earlier this year and other brave men and women across Africa who have paid the ultimate price for their dedication to their profession. "That lives continue to be lost in this senseless and grim war is a stark reminder of the severity of the threat posed by the illegal trade in wildlife," said Deputy Minister Xasa.

Successes by the Department of Environmental Affairs and its partners in rhino poaching:

- The number of rhino carcasses (poached rhino) in the Kruger National Park for the first four months of 2016 decreased from 302 to 232 – down 23 percent.
- In the first four months of 2016, 363 rhinos were poached countrywide. During the same period last year, that national figure was 404.
- The number of alleged poachers arrested in South Africa has also increased. Between January and the end of April 2016, 206 alleged poachers had been arrested.
- Between April 2015 and March 2016 there were 49 rhino prosecution finalised cases involving 103 accused. A total of 80 of these accused were convicted, resulting in a conviction rate of 78 percent.



**Above:** Best Science Research and Technology winner, Dr Dave Cooper..



**Above:** Best Political and Judicial Support winner, Advocate Ansie Venter



**Above:** Best Awareness, Education or Funding winner, Ms Antrobus.



# The future of climate change through an African lens

By Reyhana Mahomed

The Council for Scientific and Industrial Research (CSIR) has officially begun developing Africa's first Earth System model that would make input into the sixth Assessment Report (AR6) of the Intergovernmental Panel on Climate Change (IPCC). The model will incorporate the physics and chemistry of the atmosphere and the oceans and their interactions, and aim to answer questions such as what might happen to Africa's climate if greenhouse gas concentrations continue increasing, and whether climate change will result in the more frequent occurrence of strong El Niño events and drought in southern Africa amongst others.

"About 30 of these models exist in the world today, but this will be the only one developed through an African lens," explains CSIR climate modeller, Prof Francois Engelbrecht, who is leading the development of the coupled model.

In 2015, the CSIR officially became a Coupled Model Intercomparison Project Phase 6 (CMIP6) registered group of the World Climate Research Programme. CMIP6 is an experimental design for a framework for global climate change modelling until 2020. The CSIR also boasts being the first CMIP registered group in Africa meaning that the AR6 will, for the first time, contain African-derived projections of future global climate change.

Considered the lungs of the planet, the Southern Ocean – a key area of focus in the model development process - is a fundamental part of regulating global climate. "The Southern Ocean plays a big role in how the global climate works," says CSIR Oceanographer, Dr Pedro Monteiro, who leads the development of oceanic components of the model. The climate sensitivity of heat and CO2 uptake by the Southern Ocean is a recognised global challenge to which CSIR is making a growing contribution.

## Why is the CSIR zooming into global climate models?

The current global models display data at a resolution of 50 – 200 km, which is inadequate to allow for the understanding of the fine scale dynamics. "This new model will include processes at a resolution of 1 – 10km, which we think will enhance the climate sensitivity of the model," explains Monteiro. This will also make the decadal and centenary projections more accurate. "It will allow us to model processes that respond quickly to change, similar to monitoring a patient's breathing and heart beat," explains Monteiro.

The CSIR's investment in the development of this model is aimed at informing the country's adaptation strategies for climate change, which directly supports the Department of Environmental Affairs and national development plans. Projections generated by the CSIR have directly informed the Intended Nationally Determined Contribution on Adaptation that South Africa has submitted to the United Nations Framework Convention on Climate Change. The model projections are also currently informing South Africa's national communication on climate change.

## Assessment Report 6 of the IPCC

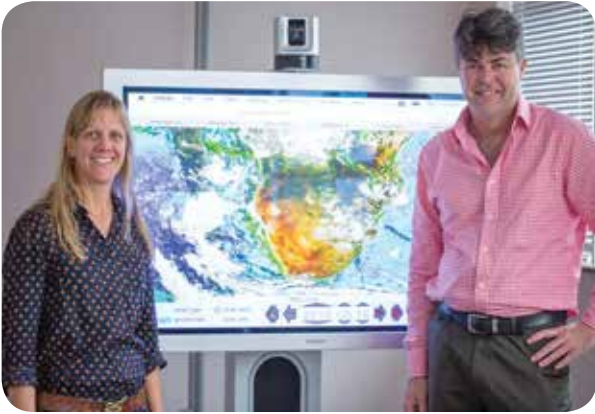
The IPCC's assessment reports are the single most important summary of climate change knowledge globally. The reports assess the evidence of climate change that has occurred to date, combines climate change projections obtained from all leading climate change institutions globally and converts the information collected into a set of plausible climate futures. The release of AR6 is currently estimated to be in December 2020. The successful development in building the first African-based Earth System Model will position the CSIR as a modelling hub in Africa.





# CSIR to develop high-tech capabilities to support Operation Phakisa

By Reyhana Mahomed



**Above:** CSIR Oceanographer, Dr Sandy Thomalla, plays a role in the development and application of ecosystem-appropriate, well-characterised products that will translate ocean colour into carbon biogeochemistry and allow new insight into ecosystem function.

For Operation Phakisa Oceans Economy to meet its target of growing the economy by R20bn by 2019, South Africa will require earth observation and forecasting capabilities at a resolution high enough to provide the right information at the appropriate scales for the entire Exclusive Economic Zone (EEZ). Researchers at the Council for Scientific and Industrial Research (CSIR) are stepping up to assist government in reaching these targets by developing high-resolution predictive and observational capabilities to support decision making in South African marine domains.

CSIR Oceanographer, Dr Björn Backeberg explains that the current models used to predict oceanic processes are at a low resolution and inadequate to provide precise enough information in support of risk and disaster management in our oceans. At present, the CSIR is capable of modelling the “big

picture” of oceanic processes, but the capabilities to provide high resolution, usable information of South Africa’s EEZ and territorial seas is currently lacking.

For example, current capabilities are similar to a weather forecast providing one temperature value for the whole of Cape Town, but in reality Newlands and Camps Bay temperatures vary considerably. “We want to know what

is happening in a specific area in as much detail as possible based on various levels of data and information,” says CSIR Oceanographer, Dr Stewart Bernard, “This will assist us in managing many aspects of the coastal zone and allow for speedier decision making processes.”

“Once we have developed these capabilities, we would be in a position to reliably observe and predict the ocean currents and other properties, for example, in the event of an oil spill we could say where the oil spill is likely to spread.”

## Why is the CSIR investing in enhancing earth observation and modelling capabilities?

The highest economic value marine domains are those closest to the coast – where there is the greatest human activity and infrastructure, but currently these domains are poorly served. “South Africa is not generating any information on those parts of the ocean, because the capabilities and

model development to do so does not exist,” says Dr Backeberg.

This initiative will add value to both the CSIR’s Earth System Model and the Operation Phakisa-related Oceans and Coastal Information Management System (OCIMS). This will, in turn, allow for greatly enhanced observational and predictive ability across bay to open-ocean scales.

This project will deliver explicit new capabilities jointly delivering to large marine services and climate change projects. Specifically for OCIMS, the outcomes will support ocean-state forecasts for maritime operations, oil spill and trajectory modelling, storm surge predictions, water quality and related products at bay scale resolution, and enhanced ocean biogeochemistry observations. These capabilities will make a substantial contribution to both ocean governance and the blue economy development component of Operation Phakisa.

The OCIMS will be able to inform the development of small or large scale new aquaculture operations, which is a big target for Operation Phakisa. “The platform will provide information on currents and winds in a specific area, as well as phytoplankton growth in the last 20 years, so that an assessment can be made in terms of how profitable a specific area would be for aquaculture,” concludes Dr Bernard.

These efforts will firmly establish the CSIR as the primary regional coastal and ocean forecasting and monitoring centre, inducing an extensive human capacity building process in the CSIR, South Africa and Africa.



## About the contributor: Reyhana Mahomed

Reyhana Mahomed is a Communications Manager at the Council for Scientific and Industrial Research (CSIR): Natural Resources and the Environment. Before joining the CSIR, Ms Mahomed was a Deputy Director in the Department of Environmental Affairs’ Chief Directorate: Communications.



# DEA launches Working for the Coast programme

By Tshego Letshwiti



**Above:** The Director General Ms Nosipho Ngcaba with Working for the Coast beneficiaries and dignitaries during the beach clean-up.

The Department of Environmental Affairs (DEA) launched yet another exciting new cycle of the Working for the Coast (Wftc) programme on 17 June 2016, during the World Oceans Day celebrations in Durban.

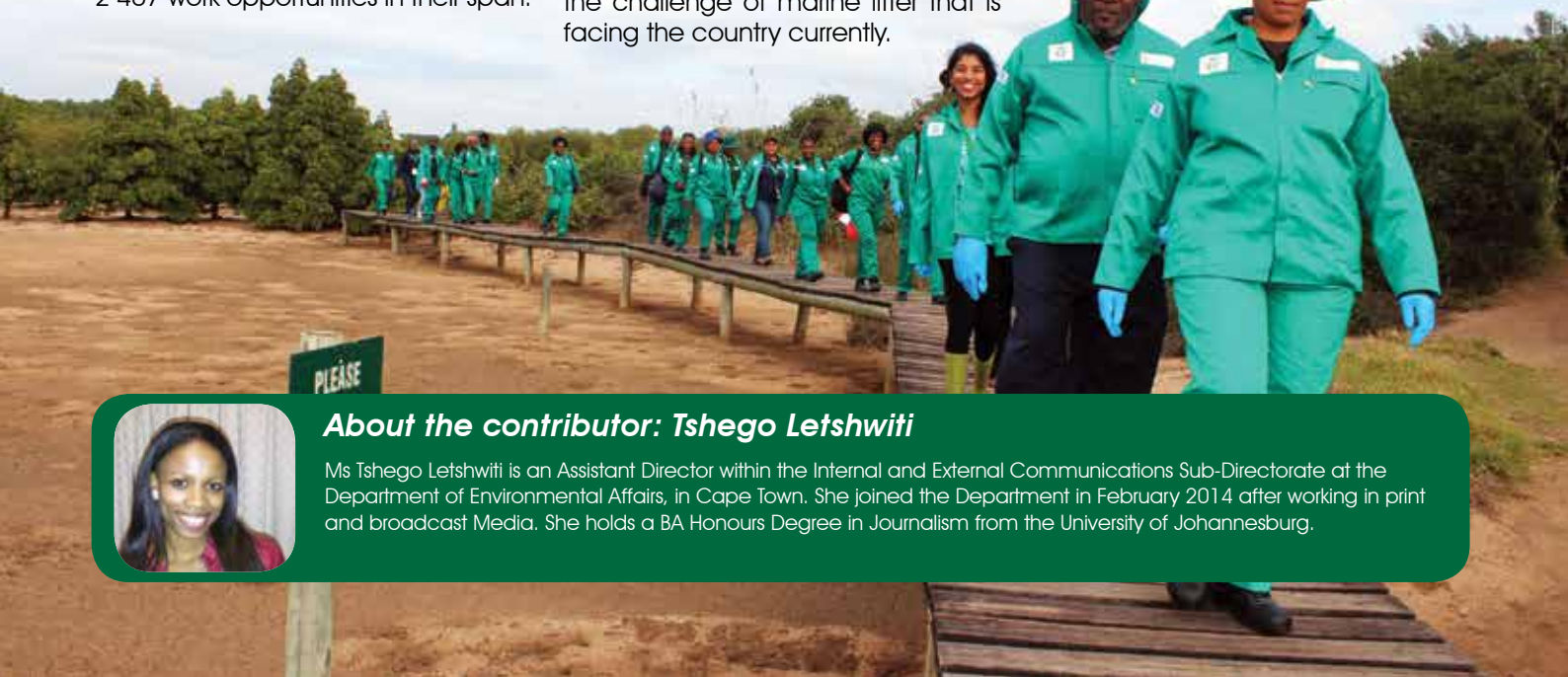
The Wftc programme is one of DEA's Expanded Public Works Projects (EPWP) implemented in order to clean and rehabilitate the coastline, whilst creating jobs and skills development in coastal communities.

The launch introduced a new Working for the Coast project cycle which will run for two years, covering the entire South African coastline from Alexander Bay to Kosi Bay. These projects will generate approximately 2 407 work opportunities in their span.

The Department also hosted an eventful beach clean-up campaign to celebrate World Oceans Day led by the Director-General of DEA Ms Nosipho Ngcaba, DEA officials, community members, schools from surrounding areas, and beneficiaries of the Department's Working for Water and Working for the Coast Programmes.

During her keynote address Ms. Ngcaba announced that the total mass of waste collected on the day was 729, 5 Kilograms and that the most common litter found was plastic bottle caps, metal bottle caps, polystyrene pieces and cigarette butts. She encouraged community members to keep their beaches clean in order to combat the challenge of marine litter that is facing the country currently.

"South Africa is not immune to the problem as the presence of litter, particularly plastic items is a common sight along our recreational beaches and estuaries – especially in urban areas. The Ellen MacArthur Foundation has said that by 2050 there will be more plastic than fish in the world's oceans. Therefore celebrations such as World Oceans Day should be used to raise more awareness about the problem of plastic litter and to encourage the public to make a practical contribution by participating in clean-up campaigns," she said.



## About the contributor: Tshego Letshwiti

Ms Tshego Letshwiti is an Assistant Director within the Internal and External Communications Sub-Directorate at the Department of Environmental Affairs, in Cape Town. She joined the Department in February 2014 after working in print and broadcast Media. She holds a BA Honours Degree in Journalism from the University of Johannesburg.



# National Marine Week

The 10th of October 2016 marks the beginning of the annual National Marine Week Campaign which runs until Saturday 15 October 2016.

National Marine Week is an initiative of the Department of Environmental Affairs (DEA) which aims to raise awareness about the marine environment. The initiative recognises the important role that oceans surrounding South Africa play in giving life to the country.

## FOR MORE INFORMATION

Call Centre: 086 111 2468 | Website: [www.environment.gov.za](http://www.environment.gov.za)



**environmental affairs**

Department:  
Environmental Affairs  
REPUBLIC OF SOUTH AFRICA





# National Marine Spatial planning stakeholder summit

By Sivuyile Ngaba



**O**n 28 June 2016, the Department of Environmental Affairs (DEA) held its first National Marine Spatial Planning Stakeholder Summit at Atlantic Beach Golf Club, Melkbos Strand, Cape Town.

The purpose of the Summit was to introduce to non-governmental stakeholders the South African Marine Spatial Planning (MSP) approach, communicate the benefits of MSP in South Africa, expected opportunities for future engagements, the envisaged timeline of the process, the role of the National Working Group including the respective departments and authorities in developing and implementing the MSP and to get comments to MSP process.

Marine Spatial Planning (MSP) can be defined as an integrated, policy based approach to the regulatory management and protection of the marine environment including allocation of space that addresses the multiple, cumulative and potentially conflicting uses of the sea and thereby facilitates sustainable development. It is a process that

**“Marine Spatial Planning (MSP) can be defined as an integrated, policy based approach to the regulatory management and protection of the marine environment. ”**

enables a better development of ocean uses while ensuring that the right activities are carried out in the right place and at the right time. Furthermore, MPS improves decision making on use of marine resources, users, and uses within their jurisdiction. As a common pool resource, the coastal and ocean areas require a public and transparent process that allocates space and resources in an effective, efficient and equitable manner. It is envisaged to be flexible, regional, integrated, ecosystem based approach to address multiple uses of the ocean and coasts environment.

Addressing delegates at the summit, Chief Director for Oceans and

Coastal Research Mr Ashley Naidoo highlighted that, “The department has been tasked by Cabinet with the responsibility of coordinating and implementing MSP in South Africa, leading to unlocking the economic potential of the marine environment in a strategic manner. MSP will guide what happens in South Africa’s ocean space, ensuring that the various human activities are carried out in the right place and at the right time. This will therefore enable sustainable economic growth whilst protecting the marine environment, and recognising the needs of all.”

He further explained that, DEA collaborates with all relevant ocean sector national authorities that have a mandate relating to marine planning and management. A governmental Working Group has developed the MSP framework outlining the process to be followed for MSP in SA. This National MSP Working Group consists of representatives from a number of government departments including the department,” said Mr Ashley Naidoo.



## About the contributor: Mr Sivuyile Ngaba

Mr Sivuyile Ngaba is an Assistant Director: Internal and External Communication within the Communications Services Directorate, based in Cape Town. He joined the Department of Environmental Affairs in August 2013, after serving the Western Cape provincial Department of Social Development for seven years.

# Deputy Minister launches DEA Gender Strategy

By Zibuse Ndlovu



**Above:** Environmental Affairs Deputy Minister addressing the delegates at the 7th Women in Environment Conference in Kimberly.

The Department of Environmental Affairs (DEA) gender strategy will empower women in environment to play a meaningful role in the sector. This was revealed by Environmental Affairs Deputy Minister, Mrs Barbara Thomson during the launch of the strategy at the 7th Women in Environment Conference held in Kimberly on 25 August 2016.

The Strategy toward Gender Mainstreaming in the Environment Sector 2016 – 2021 serves as a tool to enhance compliance with national gender priorities.

Addressing the two days conference held under the theme, Gender Mainstreaming in the Environment Sector, Deputy Minister encouraged women in all walks of life, particularly in the environment sector, to be actively involved in various initiatives that promote environmental protection for the benefit of the current and future generations.

“With this strategy, we will ensure that initiatives in the environment sector are designed to support the creation of policies and programmes that

strengthen gender mainstreaming. We will ensure gender analysis and mainstreaming during the development and/or implementation of projects to include a gender lens and perspective into the whole project cycle management,” said Deputy Minister Thomson.

The Strategy aims to provide a framework and strategic direction for gender mainstreaming as well as outlining funding opportunities in the environment sector.

“Women remain an integral part of government’s environment programmes and their participation is critical in ensuring inclusiveness in environmental planning and decision-making,” said Deputy Minister.

The conference was also an opportunity for the Environment Sector to renew its commitment to take into account principles of gender equality in employment practices, policies, programmes and service delivery. The sector has further committed to take initiatives that aim at addressing the imbalances of the past and

gender inequality regardless of race, religion, disability, and so forth.

Director for Sector Performance Monitoring and Evaluation, Ms Samukelisiwe Mncube said the development of the strategy was mandate provided by all sector partners listed at the 6th annual conference held in August 2016. “The department is responding to the call by sector partners,” said Ms Mncube. Ms Nophumzile Jam-Jam of Mzamowethu Co-operative from Port St. Johns, also an exhibitor at the conference, applauded the Department for launching the gender strategy. “It is encouraging to know that our role of preserving the environment is being acknowledged.” Ms Lebogang Masilela, from KwaMhlanga in Mpumalanga said the conference was inspiring. “I was inspired mostly by the colourful exhibitions displaying magnificent art work made by women in environment,” said Ms Masilela who also uses products from invasive alien poplar removed from the wetlands of KwaMhlanga to weave flower baskets, laundry baskets, fruit baskets and lamp shades.



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## Reduce, Reuse, Recycle



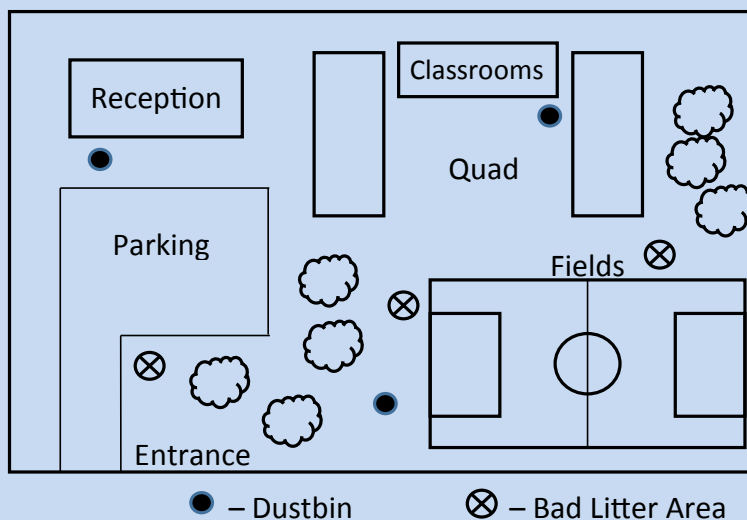
### ACTIVITY: INNOVATION WITH LITTER

you will need:

- Paper and pen
- Large container or bag
- Clean plastic shopping bags

**1** On your piece of paper, draw a map of your school or an area near your home.

**2** Go out into the area that you have mapped and collect any litter. On your map, mark where the dustbins are and where the bad litter areas are. Use clean plastic shopping bags to protect your hands.



**3** Sort the litter into organic (to make compost) and inorganic. Then sort the inorganic into paper, plastic, glass, metal, and non-recyclable. Draw a graph to show the amounts of the different types of litter.



environmental affairs

Department:  
Environmental Affairs  
REPUBLIC OF SOUTH AFRICA



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# Alien invasive species decrease water availability in North West

By Carina Malherbe and Vusi Lubisi



**Above:** Queen of the night cactus (*Cereus jamacaru*) in South Africa



**Above:** *Ageratina adenophora*, commonly known as crofton weed or sticky snakeroot



**Above:** *Tecoma stans* is a species of flowering perennial shrub in the trumpet vine family

South Africa is considered one of the driest countries in the world. The El Nino phenomenon has caused the lowest recorded rainfall in South Africa between October and December since 1981. The extreme heat has caused an increase in water demand.

North West, which contributes to maize production for the SADC region is one of the provinces hardest hit. Mines use thousands of litres of water a day. Lonmin, the world's 3rd largest producer of platinum which operates in the Platinum Belt in the North West, has announced that irrigation has been halted and that water conservation programmes have been implemented in its operations due to the continued water scarcity. Mining generates more than half of the province's gross domestic product and provides jobs for a quarter of its workforce, whereas the agricultural sector provides jobs for approximate 18% of the labour force in the province. The recent water scarcity threatens the job security of these industries. Thirsty alien invasive species are contributing to the water scarcity and the decreased productivity of these industries. Alien species have been introduced – on purpose or by accident – to

areas where they naturally do not occur. Invasive species are species that displace naturally occurring species in an area. This displacement threatens the biodiversity of the area, makes agricultural land unusable, can increase the intensity of fires, flooding, erosion and siltation. Most concerning though is the use of water by invasive species – it has been estimated to be 3.3 billion cubic meters more than the use by indigenous species. This excessive use of water is a threat to both the mining and agricultural sectors, in particular in the water scarcity experienced in the country at the moment.

One way to contribute to reducing water security in North West is to remove and eradicate alien invasive plants. North West is predominantly plagued by the following alien invasive plants:

- Black wattle (*Acacia mearnsii*)
- Cat's claw creeper (*Macfadyena unguis-cati*)
- Crofton weed (*Ageratina adenophora*)
- Famine weed (*Parthenium hysterphorus*)
- Giant reed (*Arundo donax*)
- Green wattle (*Acacia decurrens*)

- Gum trees (*certain Eucalyptus species*)
- Honey locust (*Gleditsia triacanthos*)
- Honey mesquite (*Prosopis glandulosa*)
- Inkberry (*Cestrum laevigatum*)
- Lantana (*Lantana camara*)
- Mexican sunflower (*Tithonia diversifolia*)
- Moon cactus (*Harrisia martini*)
- Pompom weed (*Campuloclinium macrocephalum*)
- Poplars (*certain Populus species*)
- Queen of the Night (*Cereus jamacaru*)
- Syringa (*Melia azedarach*)
- Various cacti (*Opuntia species*)
- Water hyacinth (*Eichhornia crassipes*)
- Yellow bells (*Tecoma stans*)

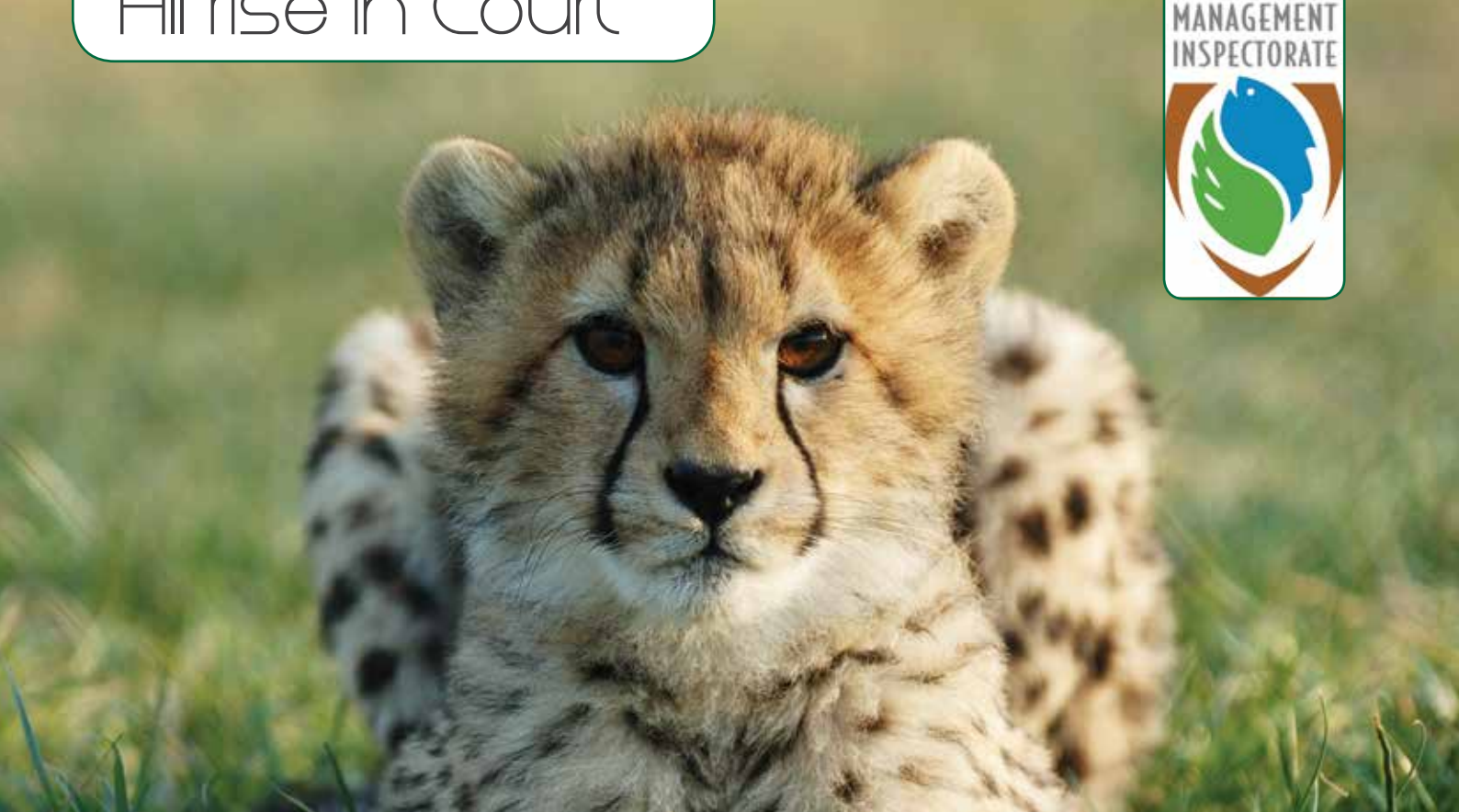
For more information on the identification and best methods for eradication of alien invasive plants in the North West Province, contact Mr Vusi Lubisi on 012 252 0021, email [vlubisi@environment.gov.za](mailto:vlubisi@environment.gov.za) or visit him at 38 Tom Street, Brits.

## About the contributors: Carina Malherbe and Vusi Lubisi

Ms Carina Malherbe is the Director of the Environmental Sector Advocacy and Coordination (ESAC) in the Environmental Programmes Branch. Ms Malherbe joined the Department in 2006.

Mr Vusi Lubisi is the Deputy-Director Responsible for developing long-term Regional Strategies for the Management and Control of Invasive Alien Plants in North West. He also consults with local authorities in sourcing Programme Beneficiaries in line with EPWP regulations.





## Search and Seizure of a Cheetah Cub

A warrant officer was informed by the SAPS Stock Theft Unit that they had confiscated two cheetah cubs from a suspect who told them that he was in the process of acquiring another cheetah cub (**"the Cub"**) from the applicant, Adriaan Stolz (**"Stolz"**).

This suspect further said that the Cub was in Stolz's custody on his farm, Diepriver, Vostershoop, North West Province (**"the Farm"**) and that the Cub had been tamed and was being reared at the Farm. Based on this information, the warrant officer with the assistance of a constable set off to conduct a search and seizure at the Farm.

It was during this search that they found, **inter alia**, rifles, animal medication and the Cub, all of which were seized. Stolz's employee signed for the list of all the items that were seized

and was also given a copy thereof. Stolz subsequently launched an application in the Mahikeng High Court (**"the High Court"**) for the return of the all the seized items. The application was based on the **mandament van spolie** (restoration of a wrongful deprivation of a person's right of possession of a movable or immovable property). The application was opposed by the respondents that included the warrant officer on the basis that the search and seizure was lawful.

### Judgment:

At the outset, the High Court noted that a Cheetah (*Acinonyx jubatus*) is listed as a Vulnerable Species on the list of threatened and protected species published in terms of section 56 of the National Environmental Management: Biodiversity Act 10 of 2004 (**"NEMBA"**) and therefore, a person may not carry out a restricted

activity involving a Cheetah without a permit issued in terms of Chapter 7 of NEMBA. It is an offence to do so, punishable with a fine not exceeding R10 million and / or 10 years imprisonment.

In coming to its decision whether or not the search and seizure was unlawful, the High Court had regards to section 20, of the Criminal Procedure Act 51 of 1977 (**"the CPA"**). The High Court held that the respondents bear the onus of proving that the search and seizure was lawful. It was common cause that the search in this matter was conducted without a warrant. In this regard, the respondents relied on section 22(b) of the CPA to justify the actions of the warrant officer and the constable.

Based on the above provisions of the CPA, the High Court had regard to the following questions:

**“This case is important to EMIs who have peace officers powers and who conduct search and seizures in accordance with National Environmental Management Act 107 of 1998 and Chapter 2, in particular sections 20; 22(b) and 21(1)(a) of the CPA.”**

**1. Were there reasonable grounds for believing that the Cub was on the Farm?**

The High Court took note of the fact that a suspect was arrested and had been found in possession of two cheetah cubs and that this suspect told the police that he was in the process of acquiring another cub from Stolz. This third cub was in Stolz’s custody at his Farm. Based on this, the High Court held the view that there were reasonable grounds for the warrant officer to believe that the cub was on Stolz’s Farm.

**2. Were there reasonable grounds for believing that a Magistrate or Justice of the peace would have issued a search warrant?**

The High Court said that in order to answer this question, consideration must be given to the provisions of section 20 of the CPA, that is, whether or not there were reasonable grounds for believing that the Cub:

- was concerned in the commission or suspected commission of an offence; or
- may afford evidence of the commission or suspected commission of an offence; or
- was intended to be used or was on reasonable grounds believed to be intended to be used in the commission of an offence.

The High Court noted that the offence or suspected offences were as follows:

- the possession or exercising physical control over the Cub without a permit in terms of NEMBA; and / or
- selling or otherwise trading in, or giving, donating or in any way disposing of a cub, without having a permit issued in terms of NEMBA.

According to the High Court, this begs the question whether or not on objective grounds, there were reasonable grounds for believing that Stolz did not have a valid permit? The High Court held that the warrant officer alleged in his answering affidavit that Stolz did not have a permit to possess the Cub. However, the warrant officer did not disclose the basis for this belief.

The High Court said that in the context where a suspect has been arrested, like in these circumstances, it would be reasonable for the warrant officer to conclude that the buyer (i.e. the suspect) did not have a permit to buy and possess the Cub. The High Court, said however, that it was not reasonable in the circumstances to infer that the seller lacked a permit to engage in a restricted activity, and that it was significant that the warrant officer made the averment that Stolz did not have a permit without explaining how he arrived at his conclusion. The High Court referred to two cases in this regard:

- The Supreme Court of Appeal in *Pakule and Tafeni v Minister of Safety and Security* [440/10 & 439/10] [2011] 107 (1 June 2011) held that the seizure of an article which was initially seized based on grounds that were not reasonable, became lawful even where it was only discovered after the seizure that there were indeed grounds for a reasonable belief that the article was concerned in the commission of an offence; and
- The Constitutional Court in *Ngqokumba v Minister of Safety and Security and Others* (CCT 87/13) [2014] ZACC 14; 2014 (7) BCLR 788(CC), on the other hand, overruled the Supreme Court of Appeal’s authority and held that in *mandament van spolie*

orders it is not proper to enquire whether or not the applicant’s possession of an article is unlawful or not as that would be enquiring into the merits of the lawfulness of the applicants possession. According to the Constitutional Court, those merits are irrelevant in proceedings for a *mandament van spolie* order: The despoiler (in this case the warrant officer who seized the Cub) must restore possession before making this enquiry.

The High Court in considering whether or not the warrant officer had reasonable grounds for believing that a delay in obtaining a search warrant in order to seize the rifles would have defeated the object of the search, held that it is evident that if a suspect receives notice of an impending search, it’s likely that he or she will remove or destroy the evidence sought. The High Court was satisfied that the warrant officer was, in the circumstances, entitled to adopt the view that he did and that the search and seizure of the rifles without a warrant was lawful.

The High Court, on the other hand, declared that the search warrant carried out by the warrant officer on the Stolz’s Farm in respect of the Cub and the medicine found on the Farm was unlawful, as the same principles could not be applied to the rifles, and consequently ordered the return of the Cub and the medicine amongst other items. It further held that the order does not however, constitute authority to possess the Cub as well as the medicine.

This case is important to EMIs who have peace officers powers and who conduct search and seizures in accordance with National Environmental Management Act 107 of 1998 and Chapter 2, in particular sections 20; 22(b) and 21(1)(a) of the CPA.

A complete case summary is available on the EMI D6 Communicator.

*This article is contributed by the Environment Management Inspectorate Legal Support in the Department of Environmental Affairs.*



# Vox Pops

DEA staff members

## How do you think you can make money from waste?



**1. Mr Eugene Swart**

**Control Biodiversity officer  
Grade B**

Through recycling, for example selling bottles and bins. I believe that there is still more that needs to be done in waste, like creating awareness especially in informal settlement areas where waste is dumped everywhere. You can also make money by collecting scrap metals, paper, glass and plastic and selling them to distributors manufactures of various products.

Sufficient and sustainable resources are critical for the implementation and regulations of these enforcements.



**2. Mr Raphalalani Phathutshedza**

**Air quality Management**

You can make money from waste through harvesting methane glass into methanol to be used as a source of energy. Properly dried and sorted, waste can provide a potent (and green) source of fuel for some industrial processes. Recycling waste products like bottles and tins and sell them for money.



**3. Ms Jabu Kubheka**

**Organisational Development in Human Resource Management**

I think the public can make money from Waste by recycling electronic waste such as old television sets, computers and cell phones. These can be sold back to the manufacturers or spare part dealers. There is also money to be made from collecting metal scrap and selling it in large quantities to manufacturers. Also we can make money by collecting used bottles and cans and selling them in a large quantities to manufactures.



**4. Mr Phumudzo Mavhunga**

**Chemicals and Waste Management**

Recycling and recovery can generate new business in transport, processing and the selling of recovered materials. Companies that manufacture and distribute products made from recycled materials can create more jobs for people. There is money in waste. When you recycle, more jobs are created than when waste is disposed.



**5. Ms Xolelwa Hoboyi**

**Operational Support and Planning**

I put money back into my pocket by avoiding to buy plastic bags at grocery stores. I always carry re-usable linen bags that are spacious enough to allow me to carry my groceries when I go shopping.

# Vox Pops continued

## Members of the public



**1. Mr Ishmael Sibiya**

One can make money from waste by turning waste products into reusable, useful products like bags and drinking glasses. There are many possibilities in re-imagining the use of what we call "waste products". In addition to transforming waste products, waste collection itself has proven to be a good money-making method for many disadvantaged individuals in communities.



**2. Mr Mandla Mahlangu**

You can make money from waste by recycling scrap paper, glass, plastic and cardboard. You can also compost organic waste

to defray methane gas production. Scrap metal and car batteries are also recyclable and profitable. would be to make it illegal to own or trade certain species. Legislation might be a lengthy process but if is necessary.



**3. Ms Boitumelo Tlhabye**

There are so many ways to sell waste and make money, like saving used cans and bottles around your area, and selling them at recycling centres. You can also look at collecting enough scrap metals to make money.



**4. Mr Thulani Mahlobo**

We can make money by collecting papers and bottles. There are so many manufacturing companies that take in waste so we can use them to make money. Sell old electronic items instead of throwing them away. There are companies that buy old electronic products whether broken or in good condition. I believe that is the essence of recycling.



**5. Mr Lonwabo Gilikidi**

I would start a business within the recycling industry. Because I have limited knowledge regarding the daily operations of such a business, I would firstly enrol myself at an accredited institution that accommodates people who have an interest in waste management. My next move would be to visit existing recycling companies just to get exposure about what is required to run a successful recycling company. Through this route, I would generate an income for myself and create employment for my community.



**6. Mr Sivuyile Ketshe**

I can make money from waste by collecting papers at work, schools and at home before they end up on the streets causing pollution. I would build miniature cars using bottles and cans and sell them on the streets. I would develop it further by building trendy items that can be used to decorate homes such as tin flowers, photo frames and pen holders.

Furthermore I would develop a business model that will find waste and turn it into something useful, for a profit. It will collect things that are generally considered difficult to recycle - such as cigarette stubs, coffee capsules, or biscuit wrappers - and finds a way to reuse them.

That will be done mainly through processing them down into a material and selling them to a manufacturer, and to a lesser extent by turning them into products such as bags, benches or dust bins.





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